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ABSTRACT

Twenty Licensed Practical Nurses (LPN) became Registered Nurses (RN) in a pilot program giving partial academic credit for their LPN training and building on their existing skills. The program revolved around three needs: (1) trained nurses; (2) eliminating the notion that jobs were dead-end; and (3) achieving upward mobility for hospital staff. Curriculum development, selection of students, the counseling program, funding, and methodology are described. The succeeding section reviews program results from three points of view: a detailed evaluation of academic results, showing that the 20 LPN to RN students compare satisfactorily with many students educated in diploma or baccalaureate programs and all 20 passed their State Boards with better than average scores; the students' evaluation of their experience; and an examination of financial data to identify benefits to the individual, the institution, and the community at large. Student success reinforced belief that a specialized but accelerated program does not adversely affect training. Students' future plans and followup of the program are discussed. Seven conclusions regarding the successful program's elements, students, and upward career mobility end the report. Appendixes include: other LPN to RN programs; career ladder programs; and the Research and Nursing Skills Inventory Questionnaires. (Author/NH)

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upgrading LPN to RN program

The University of Chicago
Hospital and Clinics

Olive-Harvey College

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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REPORT ON THE

Upgrading Licensed Practical Nurse to Registered Nurse Program

A Cooperative Effort Between

THE UNIVERSITY OF CHICAGO HOSPITALS AND CLINICS

AND

OLIVE-HARVEY COLLEGE, CITY COLLEGE OF CHICAGO

September, 1971 - June, 1973

The Research reported herein was performed pursuant to a contract with the State of Illinois, Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, Research and Development Unit. Contractors undertaking projects under such sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Board of Vocational Education and Rehabilitation position or policy.

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The author also wishes to acknowledge that she takes full and sole responsibility for the ideas and conclusions drawn in the report.

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October, 1973

TABLE OF CONTENTS

	Page
GENERAL INTRODUCTION	1
PLAN OF IMPLEMENTATION	5
Curriculum Development	5
Selection of Students	7
Counseling Program	15
Funding	17
Methodology	20
RESULTS	21
Academic Evaluation	21
Correlations	22
Student Evaluation	35
Financial Analysis	38
FUTURE PLANS	47
CONCLUSIONS	51
APPENDICES	53
Appendix A Member Agencies, Interim Health Organization	53
B Other Programs	57
C The University of Chicago Hospitals and Clinics Career Ladder Programs	61
D Research Questionnaire	71
E Nursing Skills Inventory Questionnaire	77
F Cost of Program	81

TABLE OF GRAPHS, TABLES, FIGURES

Title	Page
Graph 1, Distribution of Composite Scores on NLN Entrance Examination	11
Graph 2, Supervisors' Evaluations of LPN Work Performance	12
Table 1, Student Profile	13
Graph 3, Number of Children	14
Graph 4, Age	14
Graph 5, Marital Status	14
Graph 6, Number of Residences in Past 5 Years	14
Graph 7, National League for Nursing Pre-Nursing Examination	25
Graph 8, National League for Nursing Achievement Examination	26
Graph 9, Grade Point Average	26
Table 2, State Board Score - University of Chicago Hospitals and Clinics	28
Table 3, State Board Score - Others	29
Graph 10, State Board Scores	30
Table 4, Nursing Skills Inventory	31-33
Graph 11, Comparison of Hourly Salaries	39
Graph 12, Salary Projections	39
Table 5, Comparison of Annual Salaries	40
Table 6, Comparison of Salary by Level	41
Table 7, Salary Classification for RN Supervisor	41
Table 8, Taxable Income	45
Figure 1 and 2, Proposed models of future Programs	48-49

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GENERAL INTRODUCTION

This report will describe a pilot program which involved 20 Licensed Practical Nurses becoming Registered Nurses in a program which gave partial academic credit for their Licensed Practical Nurse training and built on their existing skills as Licensed Practical Nurses. The 20 students were recruited from the Nursing Department of The University of Chicago Hospitals and Clinics (hereinafter UCHC) where they had been employed as Licensed Practical Nurses at least one year. Since the hospital from which the students were recruited did not have its own nursing school, and since the students (many of whom were heads of households) could not afford to be in school full time, one of the chief problems became the bringing together of the appropriate agencies and institutions in a cooperative venture to achieve the goals of the program, viz., to train working Licensed Practical Nurses to become Registered Nurses. The intention in this report is to describe the "how to" aspects of the project, i.e., to identify the components necessary to the project's success and to provide the supporting data derived from the results. Ultimately, the program was brought to a successful conclusion because of the collaborative efforts of The University of Chicago Hospitals and Clinics; Olive-Harvey College, City College of Chicago; the State of Illinois Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, Research and Development Unit; the State of Illinois Bureau of Employment Security and the Women's Auxiliary of The University of Chicago Hospitals and Clinics. The UCHC provided the administrative and counseling services and fringe benefits for students; Olive-Harvey College developed the challenge examination, curriculum and academic nursing counseling program, and became the educational institution in which the 20 Practical Nurses from UCHC took their RN training; the Illinois Board of Vocational Education and Rehabilitation supplied the funds for administrative, teaching and counseling services; the Illinois Bureau of Employment Security administered the Manpower Development and Training Act funds for student allowances, and the Women's Auxiliary provided additional student support funds.

It is worth noting, we believe, that the Nursing Department at UCHC and the Department of Education and Training (a non-nursing hospital-wide training department) at UCHC cooperated to get this program started. We feel this is unique, that professional nursing would allow non-nursing staff to take the major role in the enterprise.

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The planning of the program revolved around several key issues. The most important were, the need of UCHC for trained Registered Nurses, the need to eliminate the notion that jobs for employees are dead-end, and the need for hospital staff to achieve mobility through the ranks of nursing. It was felt that the development of a program to provide Licensed Practical Nurses from the staff of the hospital with the opportunity to become Registered Nurses would meet these needs. The hospital also felt that such a program would serve the needs of the community because as people on the staff of the hospital were upgraded new staff would be hired.

The needs of the hospital were assessed by looking at hospital employment figures and state and federal data. There is a ready and abundant supply of LPN's, but not RN's; trained RN's are in short supply. Employment studies indicated that RN's on the staff who were also residents of the community stayed on the staff longer than non-residents. Therefore, training LPN's to become RN's would not only be a source of recruitment but also a source for committed, stable employees. Individual needs were assessed through a survey of LPN's on the staff who indicated their desire to move up the career ladder.

The matter of community service available through such a program was considered from the following standpoint: The University of Chicago Hospitals and Clinics employs about 2300 people. The hospital's own employment studies indicate that most staff come from within 5 miles of the front door. Hiring from within the community, therefore, provides employment for residents. The hospital has been committed to the idea of hiring in the community and upgrading staff within the world of work. Thus, as people move up, new jobs are created and new hiring begins again. The parameters of this concept extend beyond the confines of the hospital, as training and upgrading create a skilled work force. Upgrading pumps more money into the economy, the standard of living of employees goes up, and the quality of care increases.

Ample documentation outside of the institution exists for providing upward mobility for nurses. The National League of Nursing's public statements have supported this issue and in Illinois itself, documentation exists in Illinois Study Commission on Nursing, 1966 - 1968, Nursing in Illinois: An Assessment 1968 and a Plan 1980.

With the needs of the institution and the individual assessed, and the supportive data gathered, the matter was brought to the attention of the Interim Health Organization. The diverse agencies who

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cooperated to plan, implement and bring to a successful conclusion the program known as A Program to Upgrade Licensed Practical Nurses to Become Registered Nurses had a forum for discussion known as the Interim Health Organization. It is the belief of this author that the program would not have come into existence without the work of this consortium and in particular, without the monumental and very human efforts of its chairwoman, Dr. Myrna Bordelon Kassel (now deceased).

The Interim Health Organization's purpose was to provide a vehicle through which all concerned organizations could work together to promote the recruitment, training and optimum utilization of Allied Health Manpower in the Chicago Metropolitan Area. (Appendix A.) This Interim Health Organization was administered through the Human Services Manpower Career Center. Dr. Kassel, Chairwoman of the Interim Health Organization, was also Director of the Human Services Manpower Center. The center was a special research and development project funded by the United States Department of Labor. It was located within the Bureau of Employment Security and was part of the apparatus of the Illinois State government. All of the groups which finally came together in the project known as A Program to Train Licensed Practical Nurses to Become Registered Nurses, were associated in some capacity with the Interim Health Organization. A forum through which groups could meet, plan and negotiate, was thus provided, and during 1971 when the Interim Health Organization was still in existence, the parties to this project had a neutral agency acting in their behalf. This component was extremely important in the negotiating process. It is unrealistic to think that one hospital can provide all of the educational and financial components to meet the training needs of its staff. It must look to the other institutions in the community capable of providing these services. The problem is not one of lack of resources; it is rather a problem of finding a forum in which different institutions can meet to discuss mutual needs and find new and creative ways to meet those needs. The Interim Health Organization provided such a forum.

PLAN OF IMPLEMENTATION

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The plan of implementation consisted of (1) the development of a curriculum for LPN's to become RN's at Olive-Harvey College, (2) selection of students from The University of Chicago Hospitals and Clinics Department of Nursing, (3) establishment of a counseling program and (4) procurement of funds to support such an undertaking.

CURRICULUM DEVELOPMENT

Olive-Harvey College, City College of Chicago, is a comprehensive public community college committed to serving as a focus of education in its community by providing educational programs and services within the limits of its resources to all adults "who may reasonably be expected to benefit" from such program and services. The College views itself as accepting responsibility to provide a wide range of educational and supportive programs and services in the areas of baccalaureate-oriented transfer programs, occupational career-oriented programs with a continuing education component, and community service programs designed for both students and non-students with an emphasis on community development.

The Nursing Department of the College makes every effort to assist the student interested in being part of the nursing profession, to reach his/her goal in as short a time as possible. Most of the nursing students are mothers and, of necessity, must be employed at least part time. Therefore, it is almost humanly impossible for them to attend classes on a full time basis without some form of funding. Most of the students live in the "developing" community, the same area in which many of the hospitals and nursing homes are located.

In order to meet these goals, the Nursing Faculty developed a testing tool based on the objectives of Fundamentals of Nursing, the first nursing course in the College. The placement examination that is administered to all practical nurses requesting admission to the college was developed by the first semester (Nursing 101) faculty and the chairman of the Department of Nursing. The objectives of the course were used in the development of the test items. Also used were the examinations that were being used at that time in Nursing 101. After the development of this examination, it was given to each of the faculty for a critical evaluation. The test was then rewritten and it was administered to a pilot

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group of nursing students who completed the first semester of nursing. After analyzing the results, an item analysis was done and the specific test items were revised. The examination was then administered to the entire class of Nursing 101 students at the completion of their Nursing 101 Course. A correlation study was done with the result that test scores correlated well with final grades. An item analysis with revisions was again done, before the examination was administered to the practical nurses. A copy of the examination was sent to the State of Illinois Department of Registration and Education who informed the College that it could be administered to LPN's.

Determining who should take the challenge examination was based on the assumption that LPN's have educational skills and work experience that have application toward their RN academic career. Therefore, Practical Nurses from an accredited school with at least one year of experience were given an opportunity to take this examination. Those who passed were given six college credits after successful completion of Nursing 102, the second Nursing Course in the College. This in itself shortened the student's program by one semester. And, in addition to the challenge examination, the development of the curriculum was validated to meet the needs of the students. It was important to create a program that would shorten the length of time the student needed to be in school full time. This would allow the students to move through the program continuously and still come out with all of the required courses needed to take state board examinations.

Another important consideration in shortening the curriculum was the employment needs of the hospital. The sooner the students finished school, the sooner they would return to the work force. The hospital was also paying for the fringe benefits package while the students were in school; students' return to full time employment would decrease the cost of this component. The faculty at Olive-Harvey College, therefore, created a 17-month curriculum plan in which the students not only got six hours credit for Fundamentals of Nursing but also were allowed to move through the curriculum without gaps of time in the program.

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CURRICULUM PLAN - LPN - RN PROGRAM

3 Semesters + 1 Summer School
17 Actual Months of Study

	Credit Hours
Nursing 101 - Foundations	
Credit given for successfully passing the exemption examination	6
September 1971 - January 1972 (16 credit hours)	
Nursing 102 - Maternal and Child Health	6
Biology 126	4
English 101	3
Social Science 101	3
February 1972 - June 1972 (17 credit hours)	
Nursing 201 - Physical and Mental Illness I	9
Biology 127	4
Microbiology 119	4
June 1972 - August 1972 (6 credit hours)	
English 102	3
Psychology 201	3
September 1972 - January 1973 (17 credit hours)	
Nursing 202 - Physical and Mental Illness II	9
Nursing 203 - Seminar in Nursing Practice	2
Sociology 201	3
Humanities 201	3

SELECTION OF STUDENTS

The hospital in which the 20 students were employed as full time Licensed Practical Nurses is primarily a teaching and research institution. As such, the hospitals and clinics provide research facilities for the Medical School of The University of Chicago as well as patient care. The community in which the hospital is located is characterized by low income families many of whom are black. Many family members are undereducated and the rate of unemployment is correspondingly high.

Chicago, like other citities, has lost many of its middle and upper class population and is now dominated by the old, the very rich, the southern migrant blacks and whites and Puerto Ricans. The white middle class population with college degrees, children under 18, has left the city in large numbers, with the exception of the far north and far south neighborhoods. The core of the city is now

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inhabited by minorities. Ethnic groups in various stages of assimilation, the majority of whom are blue collar workers, live on the north and south fringes. Few Chicago neighborhoods have been spared "change". As black, Puerto Rican, Mexican and southern white population constantly expands, the middle class exodus to the suburbs increases. White people in buffer areas expend a great deal of energy and effort to curb "invasion" and eventual inundation by minority groups.

Chicago population projections forecast a continuation of this trend. In 1970, for example, there were 50,000 fewer white females between the ages of 30 and 44 living in the city than lived there in 1965, and the projected growth of the black female population between the ages of 30 and 44 is increasing. Labor trends indicate that a large proportion of these women will be working. Between 1960 and 1970 the number of white females between the ages of 35 and 44 in the labor force decreased by 4600. During the same decade, black females in the same age group increased the labor force by 11,700. Thus, research indicates that the majority of the female working population will be composed of black women. From them, will be drawn the predominately female hospital labor force.[1]

A description of the community is appropriate because it helps to underline the special educational needs of the students, who are also residents of the community. The majority of the Licensed Practical Nurse staff at this hospital is made up of black women, many of whom are the heads of households. This fact created two problems. One was the provision of a funding base for students who could have leave jobs to go into a full time program. The second was a consideration of the special educational needs of such students which would allow their entrance into a Registered Nurse program and the successful completion of that program.

The Department of Education and Training at the Hospitals and Clinics had previous experience with the educational needs of hospital employees. In the Fall of 1969, 166 entry level employees (nurse aides, dietary aides, etc.) took the Nelson-Denny Reading Test; only 37 achieved an 8.5 reading level. This test was administered as an entrance requirement for entry level workers to go into a Licensed Practical Nurse Program. Ultimately, some of the students recruited into the program were among the group which had an 8.5 reading level. However, some of the employees selected to go

1. Study conducted by Orgn. Research Division, Industrial Relations Center, University of Chicago, Verl R. W. Franz, Ph.D., Project Director, Sally Greisdorf Holloway, Sally Jacobson, Research Assistants, for the Girl Scout Council of Chicago. June, 1969.

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into the Practical Nurse program had only a 6.5 reading level and these students successfully completed the program also and passed state board examinations. (Appendix C). The assumption was made that the test did not yield a complete diagnosis of the students' educational skills nor did it account for the students' aspirations to move up the career ladder, a motivational factor which we felt would contribute greatly to their success. This was our first experience with entrance requirements as they pertained to employees at the hospital. In building the career ladder concept, i.e., upgrading from entry level to LPN, LPN to RN, we learned that if this career ladder were going to be possible, entrance requirements would have to be expanded so that the particular needs of the employees at the hospital could be met.

This early experience pointed out to us that black students often experience test-taking in an educational system as a barrier to higher levels of education. Such students traditionally view test-taking as a barrier toward, rather than a facilitator of, success. They consequently bring to the testing situation a series of past experience which produce psychological barriers and therefore, poor performance on tests. This does not mean that such students do not have the aspirations and motivations for moving up in their profession, nor does it mean that students, given the opportunity to participate in a program, will not complete it successfully. It was our contention that traditional entrance requirements were not appropriate for the population from which students would be drawn and other criteria would have to be developed.

One criterion was experience. Applicants for the RN program were required to be Licensed Practical Nurses with at least one year of work experience in an approved hospital or nursing home. In this case the institution was UCHC. This criterion was chosen to fulfill the expectation that a Licensed Practical Nurse has skills which have a base in education and experience.

Applicants had to demonstrate nursing knowledge by taking the Fundamentals of Nursing challenge examination. This criterion determined whether students should be given credit for 6 hours of Fundamentals of Nursing, since the examination was based on the subject matter covered in the first nursing course in the Registered Nurse curriculum and was comparable to that taught in the LPN program.

The National League for Nursing pre-admission test was administered in order to fulfill the requirement of the State of Illinois Department of Registration and Education that all nursing school

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applicants be given some standardized entrance test that measures academic ability. Some of the other Junior Colleges in the City College System require American College Testing (ACT's) of all entering students. If this had been the case at Olive-Harvey College, ACT's could have been used instead of the National League of Nursing pre-admission test (NLN). This test was used as a diagnostic tool only.

Work performance as a Licensed Practical Nurse was measured by the supervisor's Standard Evaluation form used in the hospital. This evaluation was considered most important; we felt that the person with demonstrated satisfactory work performance would be a good candidate for Registered Nurse.

Applicants had to present a high school diploma or a General Education Development Certificate. An additional Olive-Harvey requirement was that the student show proof of having taken basic mathematics and chemistry within the 5-year period prior to entering the nursing program. The students who did not fulfill this entrance requirement had the option of taking these courses at UCHC. In the summer of 1971, prior to entering the September 1971 class, those selected for the program who needed mathematics and/or chemistry, took mathematics at the hospital and chemistry at Olive-Harvey College. The mathematics course was conducted on hospital time and was developed and taught by hospital staff for the express purpose of fulfilling the Olive-Harvey College entrance requirements.

The development of criteria and the selection procedure was a joint effort between Olive-Harvey College and UCHC. A member of the Nursing Department of Olive-Harvey College came to the hospital to administer the challenge examination. The announcement for this examination was made at the hospital and all Licensed Practical Nurses on the staff who fulfilled the preliminary critera (i.e., graduate of approved Licensed Practical Nurse School, at least 1 year of experience as a Licensed Practical Nurse, high school diploma or General Education Development Certificate), were eligible to take the examination. It was given on hospital time and 73 people took this examination. Of these 73, 52 also took the NLN pre-admission test. These 52 Licensed Practical Nurses became the population from which the 20 students were chosen.

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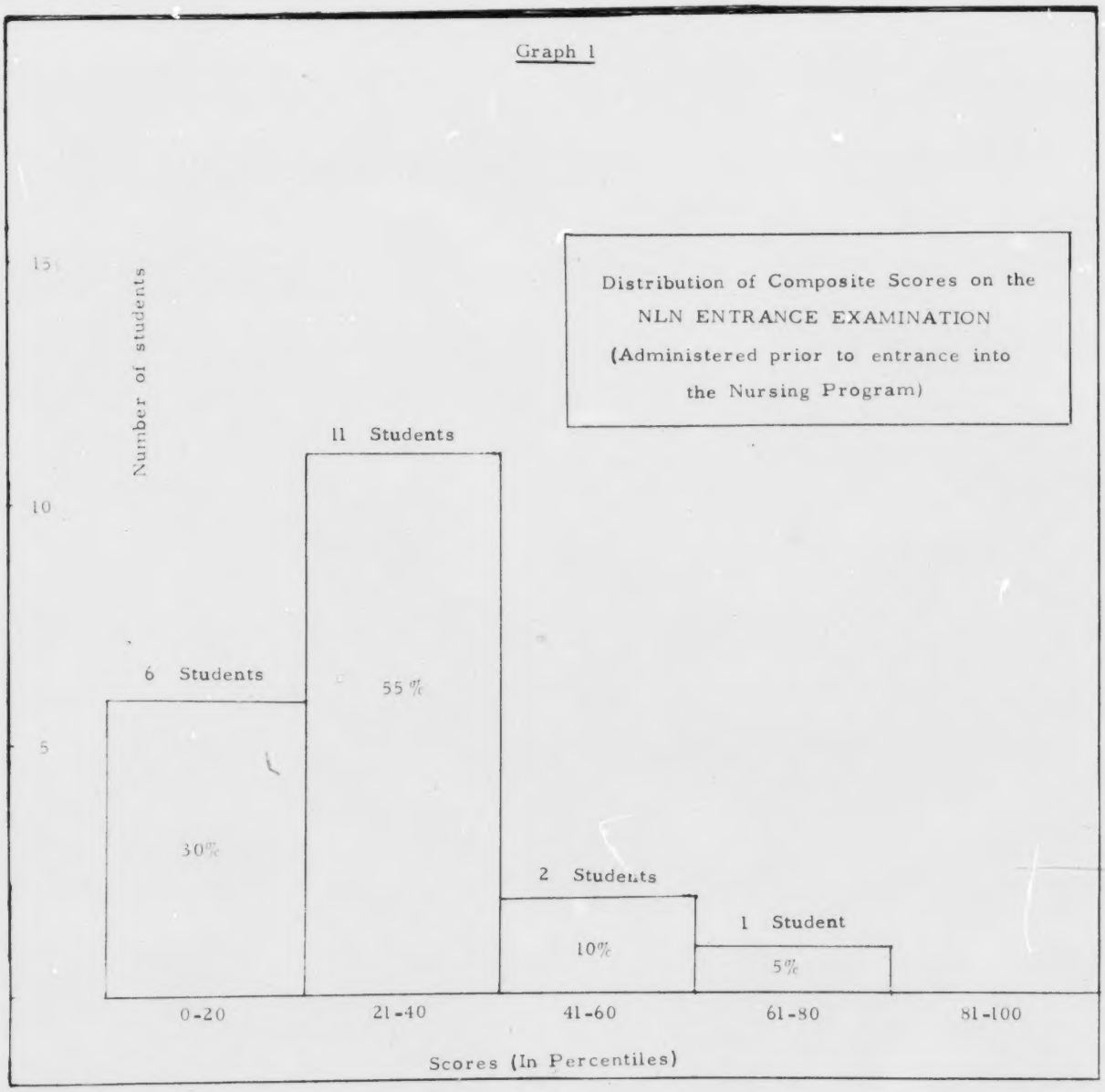
Not all criteria were given equal weight and the testing devices were used as diagnostic tools. For example, a student who did well on the challenge examination and poorly on the NLN pre-admission test, or vice versa, was not eliminated as a candidate, although greater emphasis was placed on the challenge examination than on the NLN. In some cases where the NLN scores were low, the reading comprehension component was considered useful. Students were not chosen because they were considered "the cream of the academic crop" as determined through testing. (Graph 1).

Graph 1



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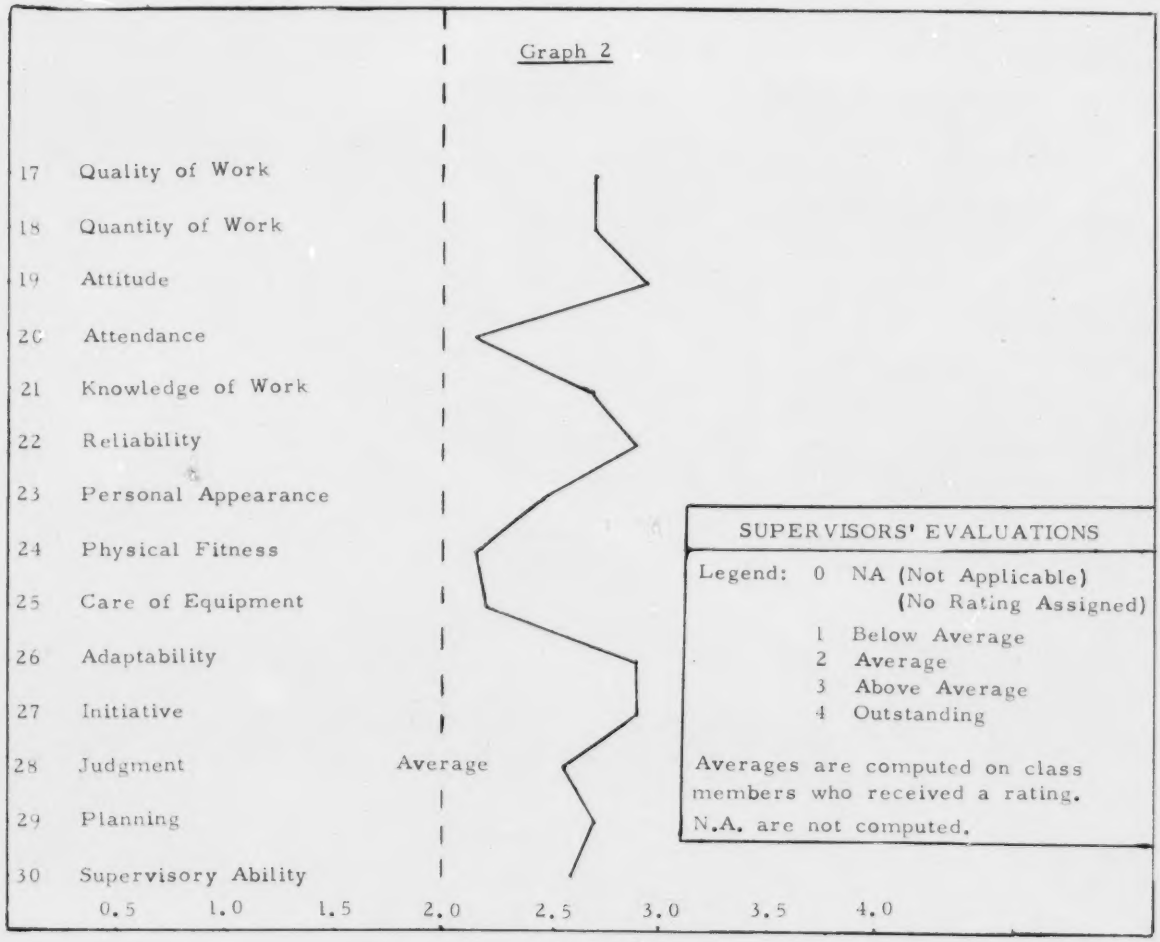
Supervisor's evaluation was considered most important. (Graph 2). Some students with poor testing scores were chosen because of a good supervisor evaluation. On the Evaluation of Work Performance, filled out by the immediate supervisor of each prospective student, one item requested that the supervisor identify whether the Licensed Practical Nurse had any "supervisory ability". For the night staff (mostly older women with children) the supervisors indicated that the Licensed Practical Nurses had the essential responsibility of supervision and planning, but because they were Practical Nurses rather than Registered Nurses, they had to get the supervisor's signatures on orders. The variables which indicated above average performance "quality of work", "quantity of work", "attitude", "reliability","adaptability", and "initiative" were weighted heavily in terms of entrance into the program. Wherever a rating was given, the mean was above average. The basis for the missing rankings was usually a lack of opportunity for the Licensed Practical Nurse to display the particular characteristic, e.g., "supervisory ability".

Graph 2



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When all factors were equal, a preference was given to the person who had already demonstrated a desire for mobility by taking some course work on her own. These courses did not have to be directly related to nursing. We felt that this type of student, with appropriate institutional and financial support would succeed academically, and become the committed, stable RN.

Selection of the 20 candidates produced the following population, as illustrated in Table I and Graphs 3, 4, 5 and 6:

TABLE I

STUDENT PROFILE

Student Number	Age At Program Entry	Marital Status	Number of Children	Residences In Past Five Years	Number of Years Experience as LPN	Number of Years at at UCHC
1	26	Div	4	2	6.5	5
2	32	Mar	1	2	9.5	13
3	37	Wid	4	1	10.	4
4	30	M	2	1	6	6
5	29	Sep	1	1	5.5	5.5
6	37	D	3	2	2.5	2.5
7	30	Single	0	2	9	1.5
8	27	M	1	2	4	2.5
9	33	D	3	2	4	4
10	24	M	2	3	5	5
11	22	S	0	1	2.5	2.5
12	28	D	1	1	7	5
13	31	M	2	3	8	4.5
14	29	S	1	2	1.5	1
15	35	M	2	1	2.5	2.5
16	33	M	2	1	8.5	8.5
17	44	M	4	1	11	11
18	27	Sep	2	2	2.5	5.5
19	30	Sep	0	1	5	1
20	38	Sep	2	3	5.5	4.5

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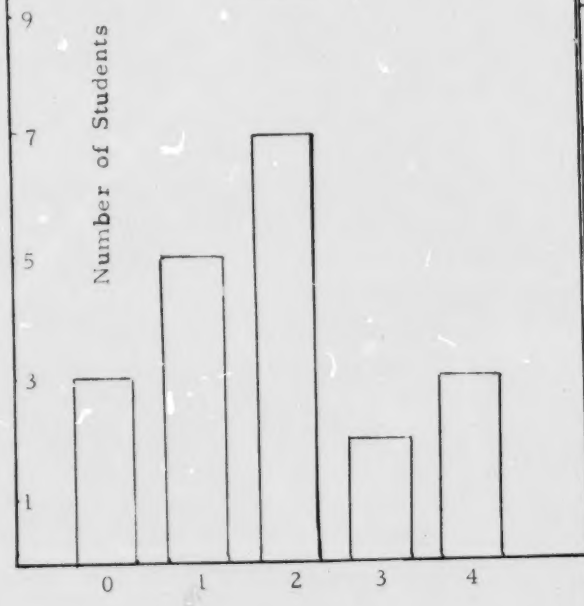
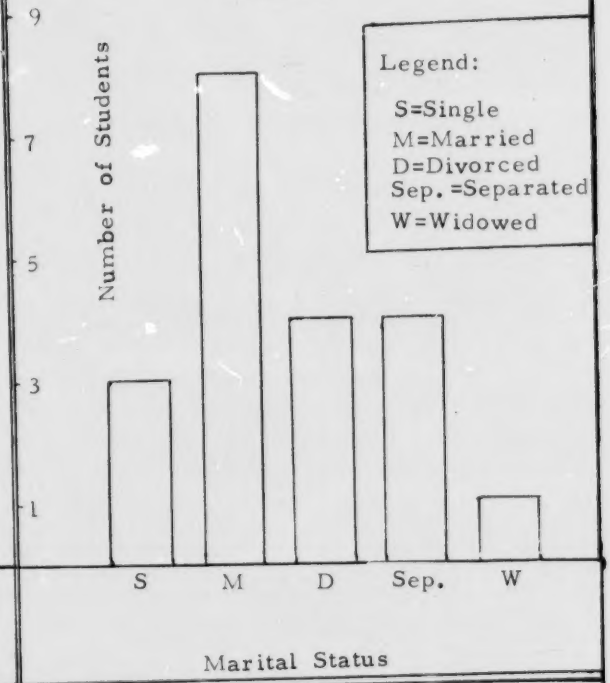
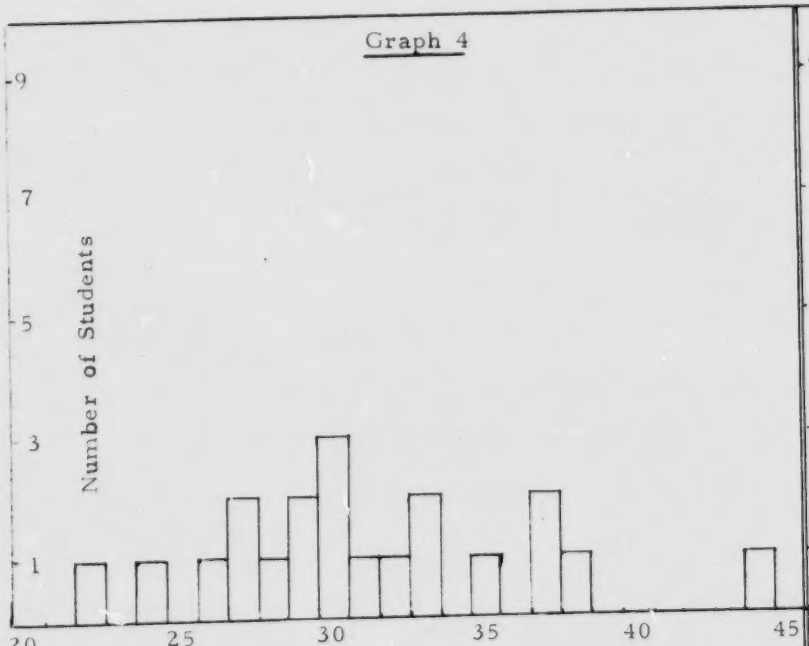
Graph 3



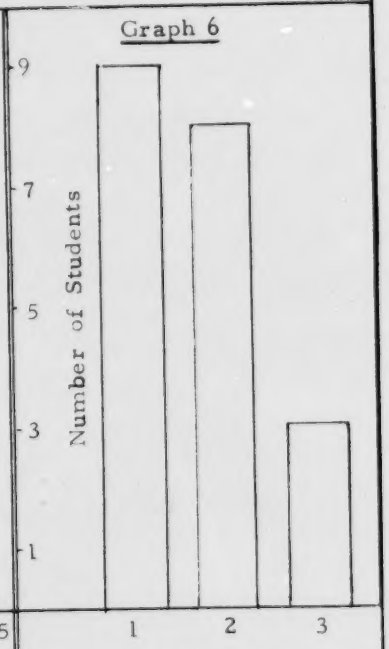
Graph 5



Graph 4



Graph 6



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Their previous Licensed Practical Nurse training came from three sources:

Cabrini School of Practical Nurse Training, Chicago, 3 students

Chicago Board of Education, 11 students

Manpower Development and Training Act, Health Occupations Careers, 6 students

Seventeen students graduated from high school; 3 students received their high school equivalency by taking the General Education Development examination. The students were also asked if they had taken the Licensed Practical Nurse Medication Course in the hospital. This course is given by the Nursing Department at The University of Chicago Hospitals and Clinics and is designed to train LPN's to pass medications. Successful completion of the course carries with it a higher degree of skill, i.e., competency in passing medications and a higher salary. Fourteen students had taken the Medication Course and six had not. The number of residences was asked for because it was felt that this was a measure of stability, i.e., the fewer residential moves, the greater the commitment to the community.

Six out of the 20 (30%) came out of the Manpower Development and Training Act, Licensed Practical Nurse Program, taught by Health Occupations Careers, the government funded division of the Chicago Board of Education. We feel this is a point especially worth noting since getting into the MDTA program is accomplished through the Illinois State Employment Service, and one of their requirements is that students must be unemployed and demonstrate need for financial aid. This program is specifically aimed at "culturally disadvantaged" members of the developing community.

COUNSELING PROGRAM

One person on the staff of the Department of Education and Training at the University of Chicago Hospitals and Clinics was identified as Coordinator-Counselor. The students were encouraged to consult her about academic, social or economic problems which troubled them. The department felt that one person could be the representative of the hospital and could demonstrate by her behavior the institutional support available to the students. Over time, this tangible evidence of support became extremely valuable to the students. Her counterpart was also available at Olive-Harvey College where the same demonstration of support could take place.

At least 25% of the counselor's time was devoted to the students. At the University

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of Chicago Hospitals and Clinics, her initial responsibility consisted of interviewing the students before the program started, both individually and in groups. She assisted with the choice of students from the total number of applicants and became the liasion between Olive-Harvey and UCHC. While most of the non-nursing academic problems were handled by the UCHC counselor, the nursing faculty at Olive-Harvey tutored students in nursing courses. The counselor at the College met with students individually and in groups and any problems dealing with the hospital were brought to the attention of the counselor in the hospital. For example, one of the problems dealt with the number of hours each student worked while still in school. In order to resolve the issue, a meeting was called at the hospital to which the students and counselors and members of the nursing department were invited, in order to negotiate differences.

During the program, any major academic problems the students had were brought to the attention of the counselor at the hospital. If the problems were of a substantive nature, such as those encountered during the microbiology course, she arranged tutorial sessions between the students and members of the microbiology faculty of the University. If the problems were more methodological in nature, she developed study helps for the individual needs of the students. For example, she helped the students to develop good basic study habits and taught outlining skills.

When students came to the counselors with economic problems, every effort was made to develop additional financial support to prevent any need for their dropping out of school. Although there were only a few instances, financial problems did arise and additional financial support was found. Many times students came to the counselors with family problems. In these cases the counselors were able to provide a setting in which the students could comfortably discuss the situations they faced. The availability of a person as an interested and sympathetic listener often aided in the solution of problems. Other staff members of the hospital were brought in as needed. A hospital is a rich source of talent and the faculty and staff of The University of Chicago Hospitals and Clinics provided needed help in the areas of their expertise.

A very strong counseling service was a necessary ingredient in the success of the program. The provision of such a service should not indicate to the reader that this group of students needed a crutch to make it through the program. The students' own desires and abilities were clearly the determining factors in the ultimate success of the program. We feel, however, that the counseling

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service made the difference between having a 100% success rate and the 30% dropout rate which is the norm in most academic institutions.

FUNDING

Funding was needed to provide administrative support, teacher salaries and allowances for the students while in training. In addition, benefits, such as hospitalization, major medical and group life insurance which the students received while employed full time at the hospital were maintained by the University during the entire program.

The funding for teachers and administrative personnel at Olive-Harvey College was needed because the 20 LPN's from UCHC were to be admitted to the school over and above the number of students in the regular Nursing Program at Olive-Harvey College. To accommodate the 20 additional students added administrative and teaching help had to be acquired.

In the Spring of 1971 a prospectus was submitted to the Research and Development Unit of The State of Illinois, Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education. It was felt at that time that the Research and Development Unit was the appropriate agency, since the prospectus clearly identified this effort as a pilot project with the appropriate research components built into the study. The general objectives outlined in the prospectus were:

1. To serve the developing community and its "disadvantaged" members by providing educational opportunities and creating career mobility.
2. To fill the need for trained nurses.
3. To provide the individual with the opportunity for upward mobility.
4. To gather research data with the objective of developing a career ladder from LPN to RN on a statewide basis.

The idea was attractive to the staff of the Illinois Division of Vocational and Technical Education and after subsequent negotiations, the Division signed a contractual agreement with Olive-Harvey College to provide the program. A sub-contract was developed between Olive-Harvey College, City College of Chicago, and UCHC to cover those administrative and counseling services the hospital would provide.

The Research and Development unit of the Illinois Division of Vocational and Technical

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Education administers the funds available to Illinois under Part D, Title I of the Vocational Education Amendments of 1968. The provisions set forth through Part D are centered around establishing, operating, or evaluating exemplary programs or projects designed to broaden occupational aspirations and opportunities for youth, with special emphasis given to youths who have academic, socio-economic, or other comparable handicaps. The LPN to RN project fell directly in line with these provisions for the following specified reasons. It was to be:

A. A project for students providing educational experiences through work during the school year or in the summer.

B. A project designed to broaden or improve vocational education curricula.

C. An exchange of personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purpose of Part D, Title I (described above) including manpower agencies and industries.

D. A project for workers released from their jobs on a part time basis for the purpose of increasing their educational attainment.

The Division, therefore, provided the necessary administrative and teaching funds to support this program because the aims of the program clearly fell in line with the goals of the Division.

While administrative and teaching support came from the Division of Vocational and Technical Education, it was still necessary to find support that went directly to students so they could take a leave of absence without total loss of financial support. This financial support came from two areas. One was the State of Illinois, Bureau of Employment Security, which administers Manpower Development and Training Act Funds and the other was the Women's Auxiliary of the University of Chicago Hospitals and Clinics.

The Illinois State Employment Service, through the Bureau of Employment Security, participated in the program and provided allowances to those students who were eligible in order to demonstrate the feasibility of using manpower programs for upgrading employed workers and to try out new concepts which could be used as models for future programs. The Bureau felt that the following issues could be demonstrated through this program:

1. Feasibility of part time training in connection with released time from work.

2. Employer-Government joint participation in funding programs.

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3. Cost benefits in relationship to improved economic status of enrollees.

4. Cost benefits in training Licensed Practical Nurses to become Registered Nurses as compared with teaching previously untrained students to become Registered Nurses.

Students who worked full time received transportation allowances only. Students who worked up to 20 hours weekly were granted allowances in compensation for their diminished work schedule. This provision was extremely important to the students since many of them were married and had families.

A fuller explanation of points 3 and 4 above will be dealt with in the section of this report on financial analysis.

The other source of support funds was the Women's Auxiliary of UCHC. Each year the Executive Committee of the Auxiliary meets with staff advisers to prepare a budget for expenditure of funds and a decision was made to provide funds for health careers and to channel these funds to the Education and Training Department of the UCHC. The population at which career mobility was directed was composed of people who were typically denied access into higher levels of professionalism and this met the Auxiliary's desire to provide funds for health careers. The Director of Nursing and the Director of Education and Training met with members of the Auxiliary Committee about the emergency need for financial assistance to the 20 Licensed Practical Nurses who were taking training under the Hospital's ladder program. As a result of this meeting, the Auxiliary Committee authorized the allocation of funds for health careers to the LPN to RN program. Since this was a full time program, the students could not work full time and funds for family support were needed. Those students eligible for Manpower Development and Training Act allowances did receive these monies; those who were not eligible for grant stipends received Auxiliary Committee funds. Some funds were loaned and some were given as stipends without repayment. The students as a group felt that whenever possible money should be repaid since these funds could then be used by students in future programs. Some money was given for books; some students had temporary emergency money problems and funds were used for this purpose also. The students were given all of their books without cost; however, some chose to purchase them at the end of the program.

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METHODOLOGY

During the Summer of 1971 before the program started, the Department of Education and Training and the Nursing Department of UCHC and Olive-Harvey College arranged for prerequisites. Those students who did not meet Olive-Harvey's requirement for basic mathematics and chemistry within the last 5 years were given the opportunity to take these courses. In September of 1971, all 20 LPN's began taking formal classes at Olive-Harvey College. Because the challenging examination gave the LPN's the opportunity to omit Nursing 101, their first semester consisted of Nursing 102 (maternal and child health), Biology 126, English 101 and Social Science 101: a total of 16 hours. This was a heavy schedule and much support was sought by and given to the students in the form of study helps by the counseling staff at UCHC and Olive-Harvey College.

The students attended classes full time and worked part time at the hospital, (fewer than 19 hours per week). The hospital nursing department maintained a flexible attitude toward the students, allowing for fluctuation in hours of part time work and for full time work during vacations if the students so desired.

At the beginning of their first nursing course, Nursing 102, the teachers gave pre-tests and had a general review to lead the students into the course. In these nursing courses the teachers were able to extend the scope of learning because of the students' LPN practical experience. Members of the class who qualified, were given the opportunity to take a nursing seminar which was devoted to real problems encountered in their current experience. Everyone who took the seminar was required to be currently employed in a hospital. This was not a required course, but those who took this seminar felt that they benefited from the exchange of information. During the program, if it became difficult or impossible for an individual to take a non-nursing course with the rest of the class, then the facilities of the other community colleges in the City College System were available to help the student fulfill her requirement at another time.

The resources available, such as a specially tailored curriculum, understanding teachers, supportive counselors, flexible work scheduling and utilization of the other City Colleges were the components of a methodology designed to allow an LPN in the world of work to become an RN in the shortest possible time.

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RESULTS

Results of the program will be described from three points of view: first, an evaluation of academic results; second, the students' own evaluation of their experience; third, an examination of financial data in order to identify benefits to the individual, the institution and the community at large.

ACADEMIC EVALUATION

Identified in the prospectus submitted to the State of Illinois, were three evaluation questions which related to the academic portions of the program:

1. Are the present predictors of success in a nursing program, i.e., National League for Nursing preadmission examination, valid and reliable? Is it possible that among the students, the intellective and educational characteristics measured by the National League for Nursing are less important predictors than certain non-intellective factors, such as success in a previous level of nursing, work experience in nursing and heavy personal investment into occupational advancement?
2. Does the use of challenging examinations truly identify the duplications in Licensed Practical Nurse and Registered Nurse training, and are they a valid and reliable way of measuring the knowledge and skills a Licensed Practical Nurse has acquired through education and experience?
3. Is it possible to give credit to the Licensed Practical Nurse for the practical and educational experience she has and produce a qualified Registered Nurse? Is this student able to function on the job as well as a nurse who has trained in a diploma program, Associate of Arts degree in nursing program, or baccalaureate program?

In Item 3 above the assumption was made in identifying nursing progress at three levels that the Licensed Practical Nurse coming into any such program would be treated as a beginning student and that no recognition would be granted for previous knowledge or experience in any level of nursing.

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CORRELATIONS

In order to answer the question as to whether the pre-admission testing devices predict the success of a student passing State Board Examinations, correlations were calculated on pre-admission tests and State Board scores. Correlations were also tabulated on State Board LPN scores for the 20 UCHC students and their RN State Board scores. Although LPN State Board scores were not used as an entrance criterion, it was felt that these correlations might be useful to determine whether they would be good and valid predictors of success in future programs. They were calculated on the following groups of students:

1. 20 members of the UCHC group and the 19 other members of the Olive-Harvey class;
2. The total class (N=39) and the previous Olive-Harvey classes of 1970, 1971 1972 and
3. The 20 UCHC students and the previous Olive-Harvey classes of 1970, 1971 and 1972.

The Olive-Harvey entering class of September 1971 consisted of:

1)	The University of Chicago Hospitals and Clinics LPN's, who challenged out of Nursing 101	20 students
2)	LPN's in the program without institutional support, who challenged out of Nursing 101	6 students
3)	Transfer students, LPN's but did not challenge	2 students
4)	Others who had previously completed Nursing 101	11 students
	Total	39

The eleven students (item 4 above) included some students who had been delayed in their program by illness or personal reasons and some who needed to repeat a nursing class. Olive-Harvey College requires students to repeat any nursing class which they fail or the second nursing class in which they receive a grade of D. Three of the nineteen students (non-UCHC) did not complete their work and therefore did not graduate.

Of the 19 (non-UCHC) students in the class, 9 were LPN's who came into the program on their own. No significant correlations between groups of scores are apparent for them. We found

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that the LPN state board scores of the UCHC students did have a statistically high correlation with their RN state board scores. Although we cannot yet generalize for all comparable cases, we can for the UCHC group make the statement that LPN state board scores are the best predictors of success.

Correlations were calculated on 26 variables:

1. Age
2. NLN Preadmission: Academic Total
3. NLN: Academic Quantitative
4. NLN: Verbal
5. NLN: Reading Speed
6. NLN: Reading Level
7. NLN: Math
8. NLN: Science
9. NLN: Social Studies
10. NLN: Composite
11. Olive-Harvey Challenge Exam
12. Grade Point Average: Total
13. Grade Point Average: Nursing
14. Grade Point Average: Liberal Arts
15. NLN Achievement: Medical - Surgical
16. NLN Achievement: Medical - Surgical
17. NLN Achievement: Psychiatry
18. NLN Achievement: Obstetrics
19. NLN Achievement: Pediatrics
20. State Board Scores: Medical Nursing
21. State Board Scores: Surgical Nursing
22. State Board Scores: Obstetrics
23. State Board Scores: Pediatrics
24. State Board Scores: Psychiatry
25. State Board Scores: Average
26. LPN State Board Scores

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Among the many correlations there were few that were statistically significant. Considered as statistically significant was a correlation of 0.561 at the 1% level, for a sample size of 20. The four categories of scores, viz., NLN preadmission, Olive-Harvey challenge examination, Grade Point Average, and NLN Achievement, which were all quantitative variables administered prior to State Board Examinations, did not yield significant correlations with State Boards. The inter-correlations among the 26 variables were low, ranging from 0.019 to 0.969.

79.4% of the intercorrelations were below 0.561. A 1% significance level signifies the fact that 1 out of 100 statistically significant results occurs by chance. The higher range figures in general indicate correlations between variables which were not independent, e.g., between nursing class Grade Point Average and total Grade Point Average. These are correlations which we would expect to be high. Since these groups of scores did not correlate with State Board examinations, we cannot say that if a person tests poorly in these areas she will necessarily do poorly on State Boards. It may be, as in our case, that the State Board results will be highly positive with a very poor showing in, for example, the NLN pre-admission scores. The fact that we have a relatively large number of low correlations does not indicate that we cannot yet make quantitative statements about any predictors of success. The fact is, that their LPN State Board scores have a statistically significant correlation with their RN State Board scores, 0.591 (0.561 indicates statistical significance at the 1% level). It may be valid then, that the best quantifiable predictor of success may be success in a previous level of nursing, as measured by LPN State Board scores.

Graph 7, the National League for Nursing Preadmission scores of the 20 UCHC students, compared with the 19 other members of the class, indicates that the University hospital students did not do so well on this examination as the other 19 students admitted to Olive-Harvey College. The results of the National League for Nursing Achievement Test, however, administered to the entire class of students after they had completed their second nursing course, indicates something else (Graph 8). That is, the 5 sections of the Achievement Test (medical-surgical Part I, medical-surgical Part II, psychiatry, obstetrics, and pediatrics) all show mean scores higher for the 20 UCHC LPN's than the mean scores of the other 19 students in the class. This same condition holds for grade point averages. (Graph 9). In all three areas: total grade point average, nursing grade point average, and liberal arts grade point average, the mean of the 20 UCHC students is higher than the mean of the other 19 students in the class. By the time the 20 UCHC students had completed their second nursing

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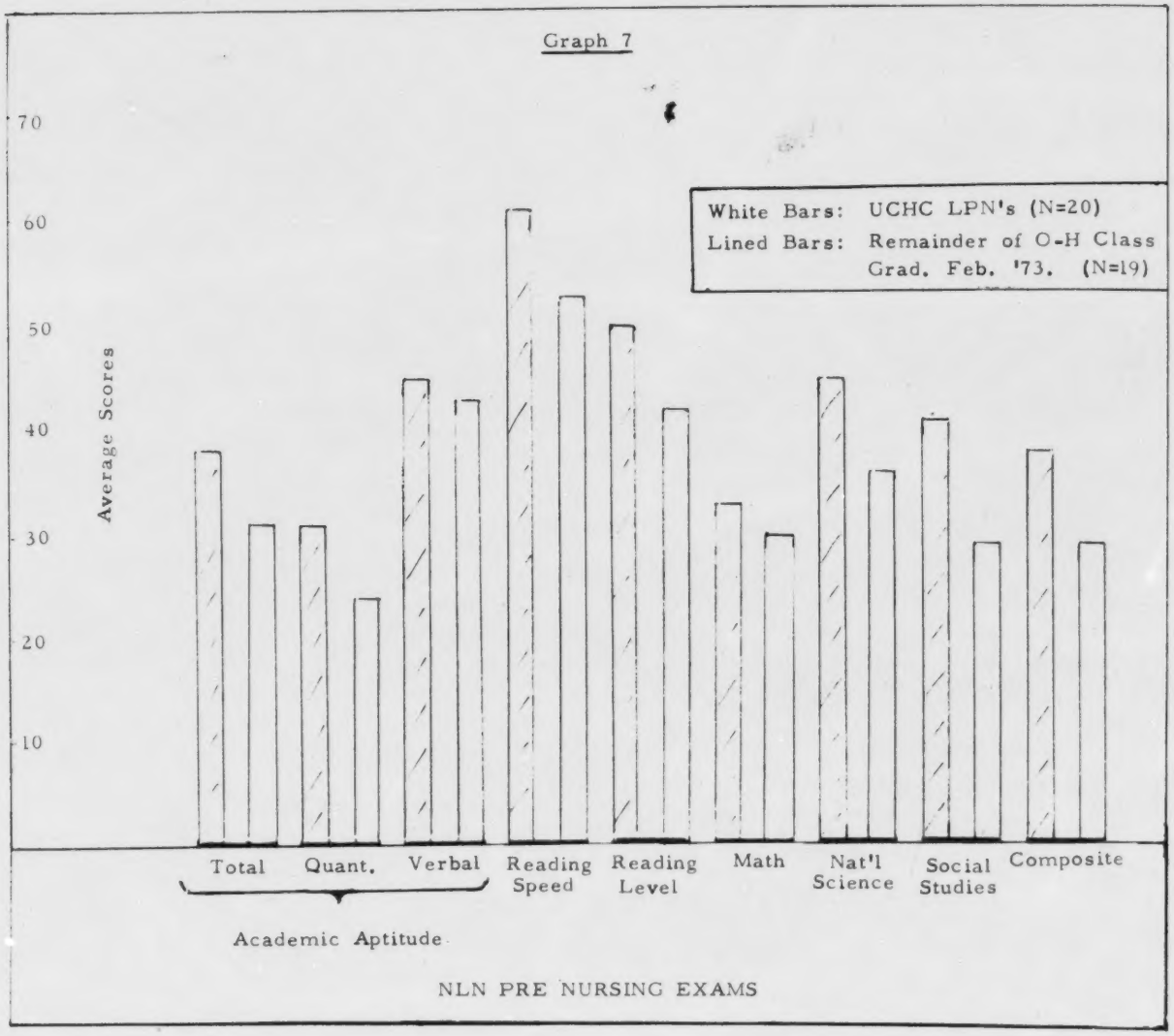
course, however, they were doing at least as well as or better than, other students admitted into the program. Low scores on the NLN pre-admission test did not predict lack of success in their program up to this point.

Graph 7



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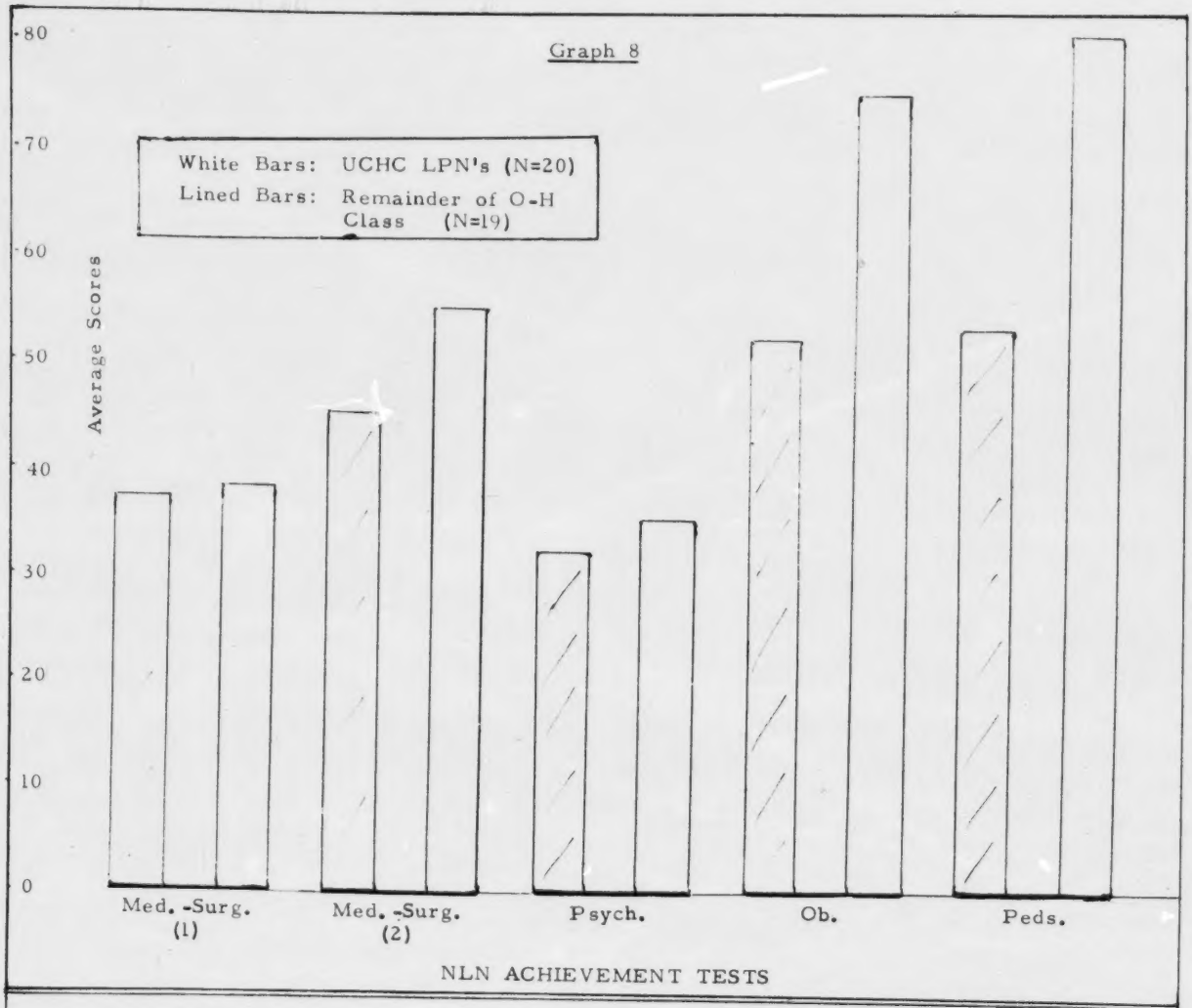
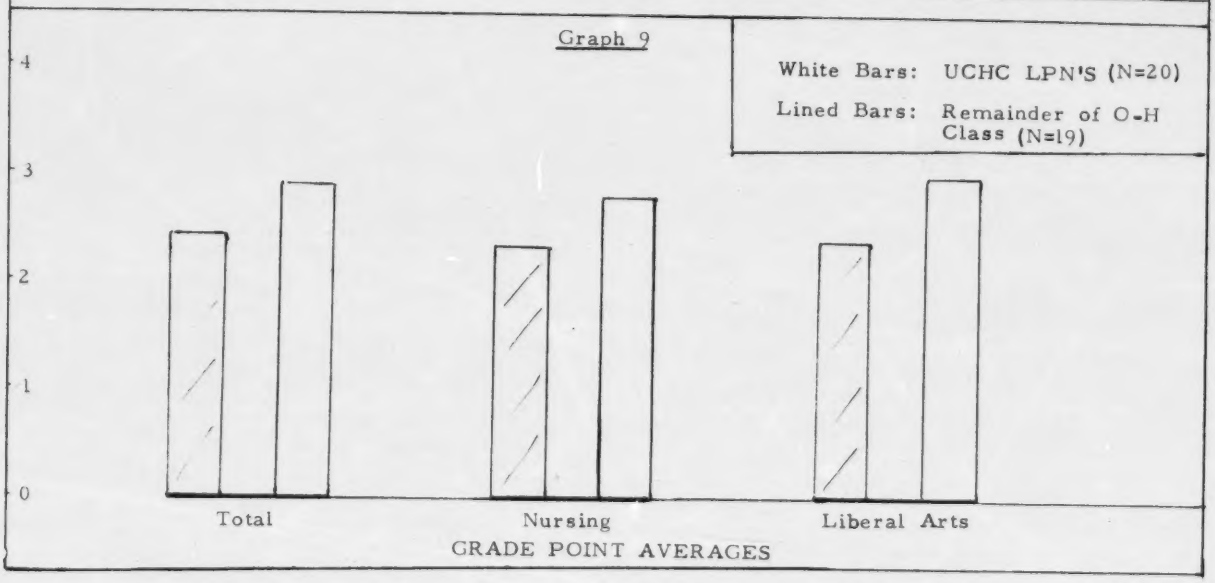
Graph 8



NLN ACHIEVEMENT TESTS

Graph 9



GRADE POINT AVERAGES

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Of the 20 UCHC students who were in the program 19 took State Boards. (The one remaining student did not receive the implementation card which would have allowed her admission into State Board Examinations in time to take these examinations in February.) The other 16 who graduated did not take State Board Examinations in February, 1973, because no space was available at the time. In June, 1973, other members of the class took State Boards: the one University of Chicago Hospitals and Clinics LPN who had not previously taken them, the 16 other class members who graduated in February and 2 of the additional three who completed work in June. (The two remaining class members have not yet successfully completed their training.) Results of these State Board Examinations are as follows: 20 UCHC students took State Board Examinations and all passed. Range of scores was 448.4 to 661.4 with a mean score of 545. 8 (Table 2). Passing score is 350. Of the 19 others in the class, the range of scores was 315.0 to 618.8 with a mean of 445.7. Of these 19, 7 failed the State Board Examination (Table 3). The fact of 100% success on the part of the 20 UCHC students pointed up to us that the criteria chosen to select students into the program were good and that perhaps there are other measures of success besides quantitative ones, such as supervisors' evaluation of work performance and personal motivation.

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TABLE 2

20 UCHC STUDENTS

Student Number	RN State Board Scores						LPN State Board Exams
	Medical	Surgical	Obstetrics	Pediatrics	Psychiatry	Average	
1	537	633	394	504	480	509.6	460
2	495	516	566	589	516	536.4	585
3	523	520	465	413	457	475.6	438
4	577	569	457	665	503	554.2	544
5	443	456	385	532	426	448.4	460
6	570	605	680	623	564	608.4	525
7	630	548	573	581	480	562.4	519
8	597	562	492	567	487	541.0	516
9	690	626	680	686	625	651.4	689
10	470	591	528	483	449	504.2	472
11	603	520	564	578	518	544.6	602
12	577	548	510	581	510	545.2	483
13	557	484	537	490	549	523.4	539
14	623	576	546	651	572	593.6	547
15	543	520	546	595	533	546.8	607
16	623	676	688	567	572	625.2	491
17	550	576	439	595	411	514.2	547
18	610	591	564	490	472	545.4	456
19	597	647	528	553	510	567	523
20	523	562	430	574	457	509.2	479
UCHC mean	570.7	568.9	526.6	561.5	503.9	546.3	
Illinois Mean	512.7	523.0	512.9	516.3	514.0	515.8*	
National Mean	511.6	517.4	512.2	518.3	520.9	516.1*	

*These are not available for the examination which our students took since they are figured annually from June to June. The figures quoted represent scores from Illinois and the United States for tests given June 1, 1971 - June 1, 1972.

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TABLE 3

19 OTHER OLIVE - HARVEY STUDENTS

RN State Board Scores

* = Test Failed

Student Number	Medical	Surgical	Obstetrics	Pediatrics	Psychiatry	Average	
1	294*	343*	366	458	342*	360.6	FAIL
2	467	350	358	451	326*	390.4	FAIL
3	315*	249*	300	393	318*	315.0	FAIL
4	426	396	446	575	500	472.6	
5	343*	329*	316*	437	302*	345.4	FAIL
6	654	516	474	618	659	584.2	
7	405	289*	300*	386	270*	330.0	FAIL
8	377	383	508	458	445	434.2	
9	522	436	466	516	453	478.6	
10	564	516	466	546	421	502.6	
11	481	463	441	415	389	437.8	
12	495	516	533	444	445	486.6	
13	508	583	508	589	572	552.0	
14	495	410	591	487	500	496.6	
15	481	443	491	567	532	502.8	
16	571	610	691	618	604	618.8	
17	343*	289*	374	429	477	382.4	FAIL
18	419	223*	541	415	151*	349.8	FAIL
19	356	430	424	444	484	427.6	
Mean						445.68	

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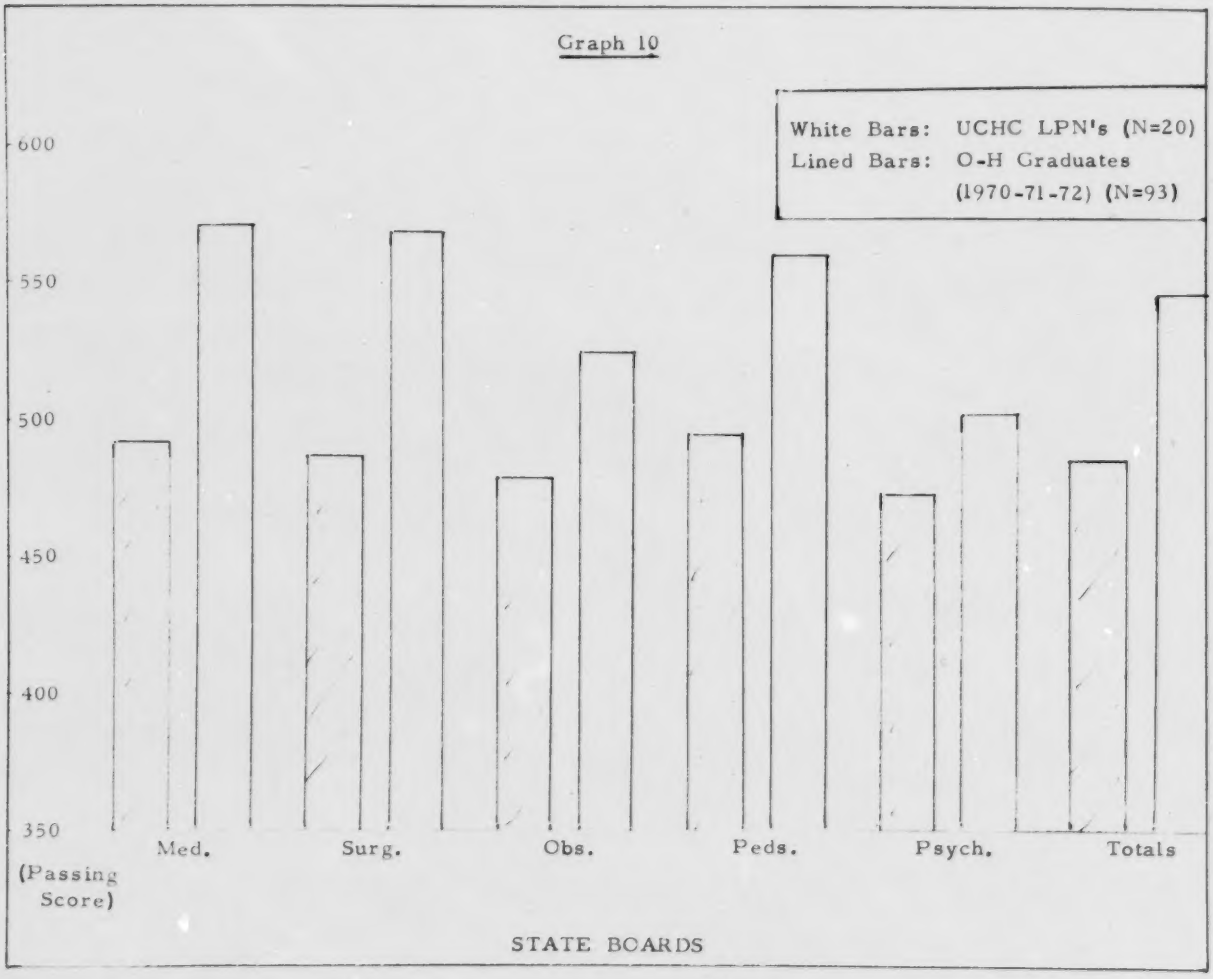
The 19 UCHC students' mean board scores have been compared with State Board scores of Olive-Harvey classes from 1970, 1971 and 1972. (Graph 10). In almost every instance, the mean scores of UCHC students compare favorably with the overall means of the other classes. In only one instance the mean of the UCHC students is lower than the mean of another Olive-Harvey class. This case does not show in Graph 10; it occurs in the comparison of the mean of the UCHC for the Psychiatric Section of State Boards with the comparable mean of the 1972 Olive-Harvey Class. UCHC Psychiatric mean score was 503; 1972 Olive-Harvey class mean score was 517.

Graph 10



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These data indicate to us that the LPN's who were given academic credit for previous education and experience were in no way hampered from successfully completing RN training and passing State Boards.

The members of classes of 1970, 1971 and 1972 at Olive-Harvey, which included LPN's, did not have the opportunity to challenge out of Nursing 101. The results of the 26 LPN's of the February, 1973, class who successfully challenged make clear that under such circumstances the requirement for Nursing 101 may be omitted with no unfavorable effect.

In order to further demonstrate that Registered Nurses so trained are amply qualified, we compared their nursing skills with those of the other members of their nursing internship class. The UCHC Department of Nursing has developed a three-month Nurse Internship program in which all new nurse practitioners participate. A Nursing Skills Inventory was developed containing 26 items. Respondents were asked to rate themselves on each skill by indicating the appropriate one of three possible classifications: "have never done", "need review", "can function independently". (Appendix F). Comparisons were made of the 20 RN's from the pilot program and 10 new RN's who were from a number of other nursing programs. These 30 new RN's made up the Nurse Internship class.

TABLE 4 - Nursing Skills Inventory

The following table must be read as a set of differences related to the associated Graphs A, B, C and D.

Part I Graph A compares percentages of LPN to RN members of nurse internship class who had never performed a certain procedure with the percentage of the other class members who had not performed the procedure. (Remainder of internship class was composed of nurses from 2-yr AA degree programs, 3-year diploma programs and BSN programs.) Graph B compares the same LPN to RN percentages with the average percentages of nurses from internship classes (June '69 to February '71) who had never performed the procedure.

Part II Graph C compares the percentages of LPN to RN class members who function independently at at the same procedures with percentages of the remainder of the nurse internship class who function independently at the procedures. Graph D compares the same LPN to RN percentages with the average percentages for members of nurse internship classes (June '69 to February '71) who function independently at the procedures.

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The table contains the percentages of members of each group who have performed the procedures at least once but who need review training before they can perform independently. These compose all members of each group not included in Part I or Part II.

(Note that Nursing Skills Inventory was enlarged for the class containing the LPN to RN's so the set of previous averages does not contain information about some of the procedures included in the later inventory.)

	Percentages of Nurses Who Need Review		
Skill	N=20 LPN to RN	N=10 Remainder of Nurse Internship Class	N=70 Average of Nurse Internship Classes (June '69 - Feb. '71)
1. Pressure Mattress	5	50	21
2. Ace Bandage	10	10	8
3. Baron Pump	25	30	12
4. Bedscale	10	10	25
5. Cardiac Monitors	70	70	53
6. Cardio-pulmonary Resuscitation	75	50	66
7. Catheterization: Insert Foley	15	30	11
8. Catheterization: Remove Foley	10	10	-
9. Central Venous Pressure	20	50	46
10. Clean Catch Urine	0	10	11
11. Circo-Electric Bed	35	40	25
12. Colostomy	5	30	41
13. Dermatology Dressings	15	10	32
14. Fractionals	0	0	11
15. Gastric Feedings	0	30	18
16. Hypo-hyper-thermia Mattress	10	40	35
17. K-pak	0	10	27
18. Pap Smear	10	20	29
19. Care of Patient with Chest Tubes	55	60	52
20. Specific Gravity	0	40	31
21. Suction: Tracheostomy	5	50	30
22. Suction: Naso-tracheal	0	60	38
23. Team Leading: Make assignments	35	40	
24. Team Leading: Manage Patient Care	40	40	
25. Formulate Nursing Care Plans	45	30	
26. Pass Medications	20	10	

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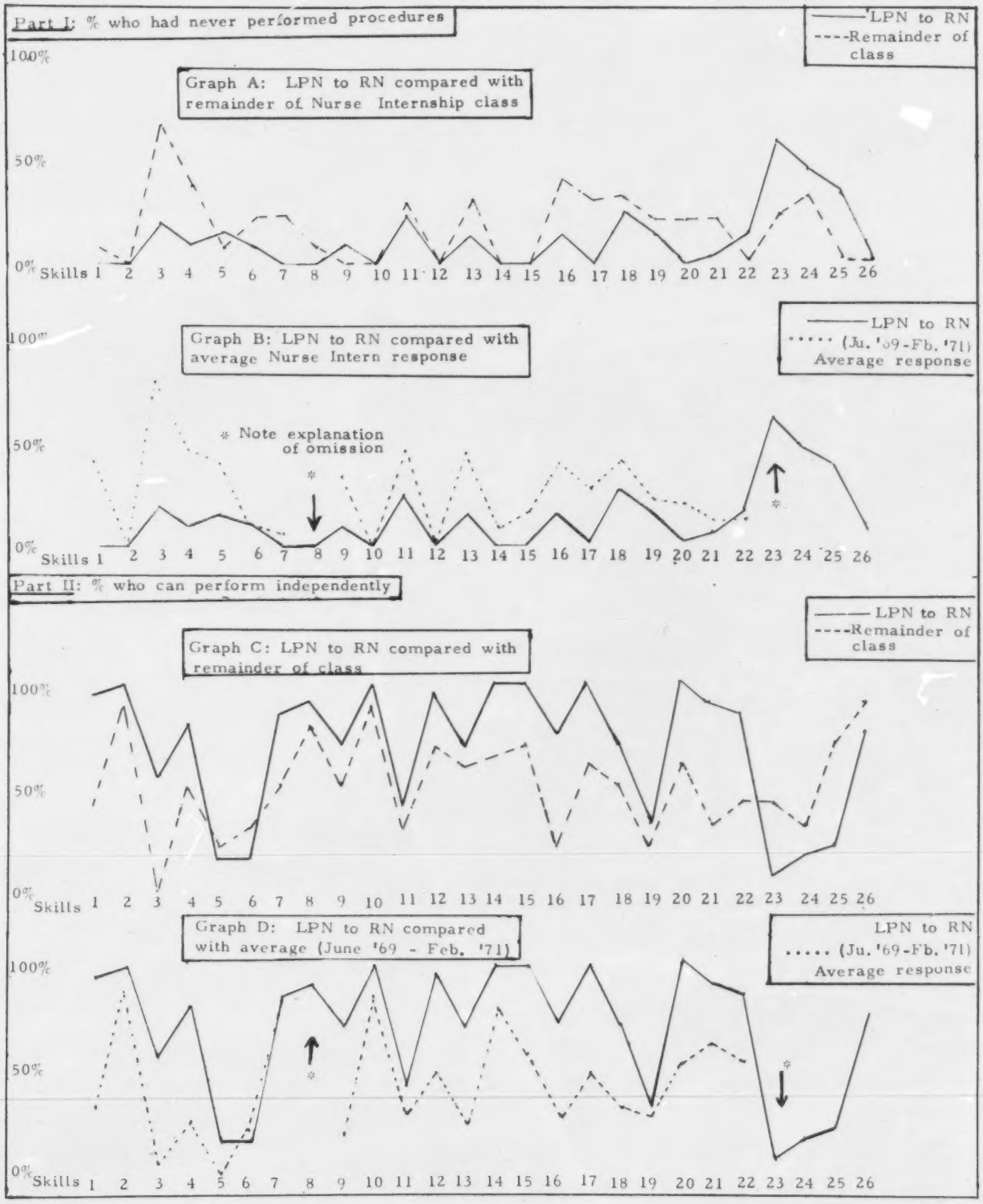
Part I: % who had never performed procedures
LPN to RN
Remainder of class
100%
Graph A: LPN to RN compared with remainder of Nurse Internship class
50%
0%
Skills 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
LPN to RN
(Ju. '69-Fb. '71) Average response
Graph B: LPN to RN compared with average Nurse Intern response
* Note explanation of omission
Part II: % who can perform independently
Graph C: LPN to RN compared with remainder of class
Graph D: LPN to RN compared with average (June '69 - Feb. '71)

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Table 4 compares the 20 LPN to RN students with the 10 others in their Nurse Internship class and also with the averages of the previous classes. It is interesting to note that the former LPN's identify as "functions never performed", items such as "making assignments as a team leader" or "formulating nursing care plans", both functions which they would not have performed during their previous experience. There are also items such as "cardiac monitoring" and "cardio-pulmonary resuscitation" which were new to them because their previous assignments had not included such work. In other areas, however, their experience shows in the number of positive responses they gave to "perform functions independently". This is not surprising to us since Practical Nurse education emphasizes skills rather than knowledge and should in no way indicate that the new RN practitioner without LPN experience is deficient in any way; her skills will be developed on the job. Furthermore, the degree of expertise that the LPN's felt they had with a particular function was directly related to the unit on which they had worked as LPN's.

The 10 other nurse interns responded differently. (Table 4). The nursing functions that these students identified as ones "they could not perform" or "need review" were more numerous than those comparably identified by the 20 students who had previously been Licensed Practical Nurses. This in no way indicates to us that the new nurse practitioners were not able to perform these functions after some work experience; it only represents the value of experience.

Ninety per cent of the 10 new RN's responded that they could "work independently" when it came to "passing medication". On the other hand, of the 20 previous LPN's from the pilot project who were new RN's, only 75% indicated they could "pass medications" without review. This is a point worth noting since of the 20 LPN's in the pilot program, 15 took a Licensed Practical Nurse Medication course while they were still functioning as LPN's. Those 15 indicated that they could pass medications "working independently". Five students either indicated they "needed review" or had never passed medications. Of the 10 new RN's in the Intern program who were not Practical Nurses previously, only 1 said she would "need review", while 9 of these students indicated they could "work independently".

This interests us because of an assumption that was made when the 20 LPN's came back to work in the Hospital as RN's. Rather than put them through the 3-month Nurse Internship program in which all other new practitioners participate, the Nursing Department decided that it would be more

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appropriate for them to be in a four week program. The decision was based on the fact that they had all previously worked at UCHC and also based on the feeling that a repetition of experience was not necessary for them. We believe with hindsight that this was not a wise decision. The reason for the inappropriateness of this choice, was identified by the students themselves. The single most important issue that the RN who previously functioned as an LPN faces when she returns to the hospital is a conflict in roles. In terms of her training and skill development she can function as an RN but attitudinally she frequently continues to function as an LPN.

The 20 LPN to RN students all indicated that a 3-months' Internship program would have given them the needed time to adjust to their new roles as RN's, not in terms of skills but in terms of attitude. Several members of the class, when they began their RN work experience after graduation, did not want to take the responsibilities of an RN and considerable time had to be spent with them to reinforce the fact that their RN education had prepared them for this responsibility. It appears that the Nursing Skills Inventory item on "passing medication" is in further support of this role conflict. The new practitioner with no previous LPN experience could respond by saying that she could "pass medications" even though she had no previous experience doing so. On the other hand, 5 LPN's who became RN's indicated they did not want to "pass medications" without "further review", even though they were in exactly the same position as the new RN with no LPN experience.

Table 4 shows that the 20 LPN to RN students compare satisfactorily with many students educated in diploma, ADN or baccalaureate programs. It reinforces our belief that a specialized but accelerated program for LPN's does not adversely affect their training.

STUDENTS' EVALUATION OF COURSES TAKEN DURING PROGRAM

In the research questionnaire (Appendix E) students were asked to respond "yes" or "no" to the following question: "Did you feel that the following courses were repetitious of LPN training?"

Nursing 102 - Theory

Nursing 102 - Clinical Experience

Nursing 201 - Theory

Nursing 201 - Clinical Experience

Nursing 202 - Theory

Nursing 202 - Clinical Experience

Nursing 203 - Legal Aspects of Nursing

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Everybody felt that the Theory Courses were valuable. In LPN training they were taught how to perform nursing functions but in RN training they were taught why. They felt that the courses were definitely not repetitious because of this significant shift in viewpoint. Everyone felt that there was not enough clinical experience despite their previous LPN training. There were some functions they could perform well because of experience but there were others in which they had little practice. The LPN's came from all over the hospital so their experiences were varied. They felt that not enough attention was paid to the experiences they had not had. For example, those students who had surgical floor experience as LPN's could respond to State Board questions regarding surgery but those students who did not have this experience felt at a distinct disadvantage, even though they all passed State Boards with better than average scores. This was the reason the College developed the Nursing 106 work/study course during the summer. Some of the LPN's could not participate because they carried 6 to 9 hours, an already heavy load.

Several students felt that they should have been allowed to skip clinical work in the area of their LPN experience and substitute work in an area with which they were not familiar. For example, LPN's who worked in obstetrics felt that clinical experience in obstetrics was a repetition of their work experience and would have preferred clinical time in areas not covered by their work as LPN's. This response was felt particularly deeply because they all thought that time for work on the floors was abbreviated. The limited clinical experience had to do with the fact that 3 hours on the clinical area is equated to 1 credit hour in the college. In this respect, diploma programs, without this constraint, do provide more clinical experience.

One student expressed the idea that more time should have been spent on "What is a good RN?" She thought that things like attitudes toward people (teachers, co-workers, patients) should be discussed in the program. This reaction was prompted by observations she made while a student at Olive-Harvey College. She felt that the attitudes of some of the students toward teachers, which she deemed inappropriate, would be carried into their work as RN's. This student felt that the group of LPN's of which she was a part, did not reflect poor attitudes and she attributed this difference to their experiences in hospital work.

Another item the student was asked to respond to was "What functions are you performing as an RN that you did not perform as an LPN?" Students identified the following functions they were

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performing as RN's:

1. Taking verbal and phone orders from physicians.
2. Increase in circulating duty. (This duty was identified by the Operating Room Nurse only).
3. I.V. push.
4. Increase in supervisory responsibility (Identified by night staff only).
5. Administrative duties, such as staffing (responded to by night staff only).
6. Responsibility for narcotics.
7. Serving as Team Leader.
8. Parenteral Therapy.
9. Abortion assisting.
10. Charge duty.
11. Passing Medications.
12. Research testing. (On endocrinology research unit only.)
13. Reading EKG. (Cardiology unit only.)
14. Listening to monitors (cardiology unit only.)
15. Being knowledgeable about electrolyte reports (cardiology only.)
16. Being knowledgeable about other related laboratory results, e.g., CPK, SGOT, LDH (cardiology only.)

It is notable that functions which were new to some of the students had already been performed by others. Sometimes these differences related to assignment areas within the hospital. Frequently they arose because night personnel had had responsibilities that daytime workers had not needed to assume. Similarly, only the LPN's who had taken the hospital Medication course had passed medications to patients prior to the change in status from LPN to RN.

The 20 students, when they worked at UCHC as LPN's came from all hospital units and returned as RN's to many different units, not necessarily the areas in which they worked as LPN's. Some chose not to go back because they wanted new experiences. Some did not go back to their original units because of supervisor's recommendation. Some supervisors thought that the transition from LPN to RN would be easier away from the old environment. They felt that some employees

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might not take orders from the new RN's, responding in an emotional rather than rational manner. They even considered that a supervisor herself might forget the former LPN's new status. This recommendation by supervisors did not reflect on the new RN's ability to perform the work, but rather was an attempt to aid in the transition of roles.

Some of the students who wished to work with the group with whom they had worked as LPN's did go back to their original units by choice. Some went back to the same unit without having a choice in the matter; they were specifically requested by a supervisor - definitely a compliment. Some were awarded the only opening available. Of the entire group two-thirds went to units different from the ones on which they worked as LPN's.

FINANCIAL ANALYSIS

Analysis will be carried out from three points of view: that of the individual, the hospital and the community.

Individual

Graph 11 compares the actual salaries earned by the 20 students when they were LPN's and when they became RN's; Graph 12 compares possible salaries after the 9-1/2 year service period which establishes maximum pay. Both graduate degrees and supervisory positions increase the RN's salary as noted in Tables 6 and 7. For example, a supervisor with an MS has an annual salary of $14,520.00. Note that in Table 5, there are three cases in which there is a slight decrease from LPN to RN salaries. These decreases occurred because the LPN salary included a night premium and the RN salary does not. In the cases in which the RN salary is substantially higher a night premium is currently included. In one case, the RN has a specially increased salary because she serves as an Operating Room Nurse.

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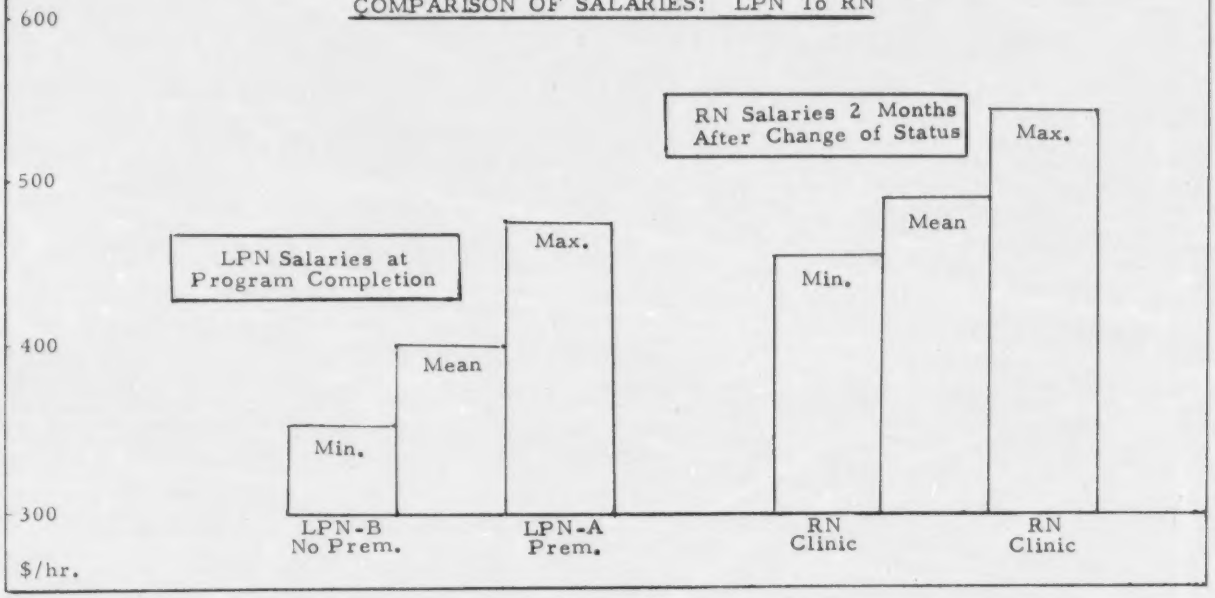
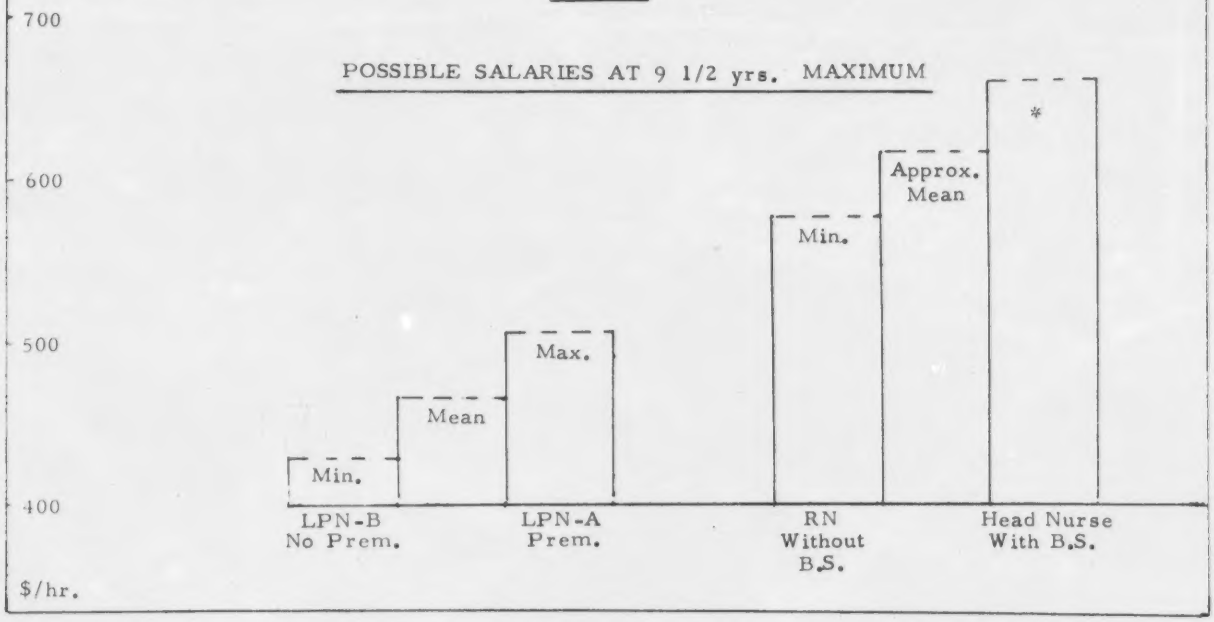
Graph 11

COMPARISON OF SALARIES: LPN To RN



Graph 12

POSSIBLE SALARIES AT 9 1/2 yrs. MAXIMUM



LPN (B) on Graph 12 signifies an LPN who has not had the Medication course and LPN (A), one who has had the course and who can therefore pass Medications. LPN (A) receives a higher salary. An asterisk (*) appears on Graph 12 instead of the notation MAX. because the salary of a Head Nurse with a BS is not a maximum.

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TABLE 5

COMPARISON OF LPN - RN ANNUAL SALARIES

Individual	LPN Salary at End of Training	RN Salary 2 Months After Becoming an RN
1	$8,122.00	$11,363.00
2	7,858.00	9,803.00
3	7,355.00	9,803.00
4	8,794.00	9,803.00
5	9,964.00	9,803.00
6	8,243.00	9,803.00
7	8,520.00	9,803.00
8	8,399.00	9,803.00
9	8,794.00	11,363.00
10	8,243.00	9,504.00
11	8,122.00	9,803.00
12	7,858.00	9,803.00
13	8,686.00	9,947.00
14	9,964.00	9,803.00
15	8,243.00	9,803.00
16	8,794.00	9,803.00
17	8,794.00	9,803.00
18	8,243.00	9,803.00
19	8,794.00	9,803.00
20	8,794.00	9,803.00

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TABLE 6

COMPARISON OF SALARIES BY LEVEL

Length of Service	LPN (B)	LPN(A)*	RN	RN/BS	Asst. Head Nurse/RN	Asst. Head Nurse/BS	Head Nurse/RN	Head Nurse/BS
New	$3.536	$3.726	$4.713	$4.857	$4.944	$5.094	$5.238	$5.394
After 6 Months	3.657	3.848	4.886	5.030	5.117	5.273	5.423	5.584
Plus 1 Year	3.773	3.969	5.053	5.203	5.296	5.451	5.613	5.786
Plus 1 Year	3.905	4.096	5.226	5.382	5.486	5.648	5.815	5.988
Plus 1 Year	4.038	4.234	5.405	5.567	5.676	5.844	6.017	6.196
Plus 1 Year	4.176	4.373	5.596	5.763	5.873	6.046	6.230	6.415
Plus 5 Years	4.315	4.517	5.798	5.971	6.080	6.259	6.444	6.634

*Can Pass Medications

TABLE 7

SALARY CLASSIFICATIONS FOR NURSING SUPERVISION

Length of Service	Diploma Graduate	BS	MS
New	$ 983.00 Per Mo.	$1,004.00 Per Mo.	$1,035.00 Per Mo.
Plus 1 Year	1,013.00 " "	1,035.00 " "	1,067.00 " "
Plus 1 Year	1,044.00 " "	1,067.00 " "	1,100.00 " "
Plus 1 Year	1,077.00 " "	1,100.00 " "	1,136.00 " "
Plus 1 Year	1,112.00 " "	1,136.00 " "	1,172.00 " "
Plus 5 Years	1,147.00 " "	1,172.00 " "	1,210.00 " "

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The mean salary for a Licensed Practical Nurse at the end of the program was $8,411.52 annually, not including overtime or premium for night work. Two months after the students began working as Registered Nurses their mean starting salary was $9,794.72 per year not including overtime or premium for night work. This is an increase of 16.4% in salary or $1,383.20 per year. While the immediate salary increase is appreciated by an individual it is the much-increased earning potential of the RN which is a far greater and more permanent benefit for a former LPN. As Graph 12 indicates, the LPN's would have been limited to the maximum noted despite any length of service beyond the 9-1/2 years. However, as soon as the LPN moves into the RN category, regular earning potential is much greater and the possibility of moving into supervisory capacity particularly enlarges the range of salaries that it is possible to achieve.

At the present writing, 3 of the RN's have been recruited into teaching positions at another institution in which they will teach students to become LPN's. It is clear to us that the career mobility concept is truly working. These 3 RN's received their LPN training through the federal government's Manpower Development and Training Act, Health Occupations Career program which means that at that time they met the government's criteria of eligibility, viz., poverty level and minority status. Their employment as LPN's at UCHC made them eligible to participate in the RN training program, and this led to their present employment status, which is teaching at another institution at considerably increased salary. Increased earning potential and status decrease the likelihood of future generations being on welfare. It has been amply documented in the literature that present welfare recipients often produce new generations of welfare recipients.

Hospital

The 20 students worked at the hospital during the 17 months of the program. Most of the time they worked fewer than 19 hours per week in order to comply with a Manpower Development and Training Act ruling establishing eligibility for allowancs. Some of them worked full time during vacations but that did not alter their status as part time employees.

Because of their decreased earnings, the Hospital underwrote the benefit package for the LPN's, the same package ordinarily maintained for full time employees. Benefits included Blue Cross, Blue Shield, major medical and group life insurance. The cost to the Hospital of this provision was just under $10,000.00 for the duration of the program; it was the only special cost

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incurred by the Hospital because of the program. As previously noted, the administrative support and supplies needed were covered by the grant from the State of Illinois, Division of Vocational and Technical Education. All other hospital costs related to the new RN's were identical with those involved in the hiring of any new employees (physical examinations, orientation, etc.) The one major exception was the cost of recruitment; no recruitment costs were incurred. Other hospital studies have indicated that it cost $1,200.00 to recruit an RN. The acquisition of 20 new RN's through the Hospital's career mobility apparatus therefore resulted in a cost savings to the Hospital of $14,000.00. ($24,000.00 recruitment costs less $10,000.00 benefits).

A further benefit which may accrue to the hospital as a consequence of the career mobility program is a possible decrease in RN staff turnover, a chronic problem the hospital faces. While we have no long-term data to support this hypothesis since the RN's have been on the staff only 6 months, we do have prior experience with an upgrading program in which entry level staff became Licensed Practical Nurses through the hospital's career mobility program. Twenty-four entry level employees of the Hospitals and Clinics were upgraded to Licensed Practical Nurses and successfully passed State Board Examinations. Eighteen months later 21 are still employed.

A further condition which would indicate a greater than average length-of-stay for the 20 RN's is their previous years of service at the Hospital. The 20 students have accumulated 95 years of service with a mean of 4.75 years per student. The maximum length of service is 13 years.

Perhaps more than the tangible results of decreased turnover and recruitment costs are the intangible benefits of the increased capacity to manage rather than retard change. The Health industry in general is undergoing rapid changes and the decisions being made by external forces as well as the decisions being made inside the industry and hospital are creating new and dynamic approaches to the delivery of care. In such an environment of flux it is extremely important to have a committed work force. We believe that the opportunity which creates mobility within the hospital setting is a good source of trained health manpower as well as evidence to those employees not participating in training that the opportunity is available. We believe that this availability of opportunity produces high morale and thus allows management to manage the delivery of care in an efficient and effective way.

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Community

When we begin to discuss the benefit to the community of such a program we really need to define what we mean by the term. We mean that community is the sum total of those persons and institutions which affect the lives of the students involved in the program. This sum would begin with the Federal Government which provided stipends through Manpower Development and Training Act; it would include the State government which administered the funds for administrative and teaching personnel; it would include the Hospital Auxiliary which provided additional support monies for students, and finally, it would encompass the students' environment in which many people live, work, shop, and play.

One of the direct returns to the community is an increase in federal taxes paid. (Table 8). Since actual tax data are not available approximate values were calculated for Table 8. Not only taxes paid but also expenditures avoided represent a return to the government. Recall the reference to the result of upward mobility made in discussing individual benefits: that there is decreased likelihood of children going back on to welfare rolls. From the government's point of view this difference can be identified in quantifiable terms. Fewer welfare-supported children mean tax dollars saved.

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TABLE 8

TAXABLE INCOME

Marital Status	No. of Dependents	LPN Salary At the end Of program	Tax On LPN Salary	RN Salary 2 Months After Training	Tax On RN Salary	Increased Taxes Paid
Single						
1	0	$8,122.00	$1,057.00	$11,363.00	$1,591.00	$ 534.00
2	0	7,858.00	1,007.00	9,803.00	1,392.00	385.00
3	1	7,355.00	769.00	9,803.00	1,227.00	458.00
Widow						
4	4	8,794.00	608.00	9,803.00	774.00	166.00
Divorced						
5	4	9,964.00	798.00	9,803.00	774.00	(24.00)
6	3	8,243.00	684.00	9,803.00	917.00	233.00
7	3	8,520.00	703.00	9,803.00	917.00	214.00
8	1	8,399.00	959.00	9,803.00	1,227.00	268.00
Separated						
9	1	8,794.00	1,032.00	11,363.00	1,364.00	332.00
10	2	8,243.00	798.00	9,504.00	1,011.00	213.00
11	0	8,122.00	1,057.00	9,803.00	1,392.00	335.00
12	2	7,858.00	722.00	9,803.00	1,062.00	340.00
Married						
13	1	8,686.00	976.00	9,947.00	1,246.00	270.00
14	2	9,964.00	1,255.00	9,803.00	1,227.00	(28.00)
15	1	8,243.00	891.00	9,803.00	1,227.00	336.00
16	2	8,794.00	992.00	9,803.00	1,227.00	235.00
17	2	8,794.00	992.00	9,803.00	1,227.00	235.00
18	2	8,243.00	891.00	9,803.00	1,227.00	336.00
19	2	8,794.00	992.00	9,803.00	1,227.00	235.00
20	4	8,794.00	992.00	9,803.00	1,227.00	235.00
		$170,584.00	$18,175.00	$199,025.00	$23,483.00	$5,308.00

The following assumptions were made to cover the cases of married students: Each Married student takes 2 exemptions and files a joint return; her husband claims their children as his dependents. The final $5,308.00 figure in Table 8 represents the increase only in federal taxes paid but there will be a corresponding increase in the State of Illinois Income Tax.

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Another return to the community takes the form of increased buying power. The total annual salary earned by the students in their RN status is $199,025.00, which represents an increase of $28,441.00 per year over their earning power as LPN's. A considerable portion of this increase will be spent in the community and this represents profits to the community directly from the RN's enlarged purchasing power. Finally, the likelihood that a percentage of the 20 RN's will move into higher positions in the Nursing Department is great. Higher positions again mean higher salaries with corresponding increases in purchasing power and taxes paid.

The total cost of the program was $207,000.00 (Appendix G) which increased the educational and professional background and hence the purchasing power of the 20 individuals. In the first year alone, the increased purchasing power of the group was $28,441.00. At a normal increase in salary of 5.5% per year over 10 years, assuming the same level of competence in the organization, the increase in purchasing power is approximately $366,194.00. If we assume each individual saves 5% per year, $18,310.00 goes to the banking community in the form of savings. Assuming a 5.5% increase in salary without change in position, the program pays for itself in terms of increased purchasing power in approximately 7 years. This calculation does not include the increase in taxes paid but only considers increased buying power.

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FUTURE PLANS

STUDENTS' FUTURE PLANS

The UCHC students were asked two questions: Do you plan to continue your education toward a baccalaureate and if so, when? All of them responded affirmatively to the first question and most of them could show evidence of a continuation of their academic career.

Many students are currently taking a higher level chemistry course at Olive-Harvey College because it is a requirement for a Bachelor of Science Degree in Nursing at The University of Illinois. One student took this course in the Spring of 1973 and four took it during the summer term. Three students plan to continue classes part-time in September; three will start in 1974. The latter three explained the delay variously: one is having a baby and the other two are taking time to get their family finances back in order. Three students have illness in the family and will let their studies lapse temporarily. In total, fourteen students have immediate plans to continue their education at the University of Illinois working toward a Bachelor of Science Degree in Nursing. The remaining six indicate continuation when it is possible. For most of these people, family finances were thrown into serious disarray while they were on allowances during training. As soon as these heads of households can stabilize their income, they indicate that they will return to school.

Only two students indicated ability to continue as full time students; all the others plan to continue on a part-time basis. For most students full time study would present another financial problem and they indicate that some form of financial support would be necessary. These responses came in follow-up interviews shortly after the completion of the program and identified attitudes toward the full time program. Going to school full time, working, and managing a family was an arduous job producing intense pressure from which some respite was in order. The fact that even during such a decompression period, the 20 students stated their intention to continue school indicates their degree of commitment. It will be interesting to follow up this aspect of their education one year from now to see if these attitudes are still prevalent.

FUTURE RESEARCH

The UCHC plans to follow as far as possible the entire Olive-Harvey Class of February 1973 in their professional and educational development. Although our special interest is in the LPN's

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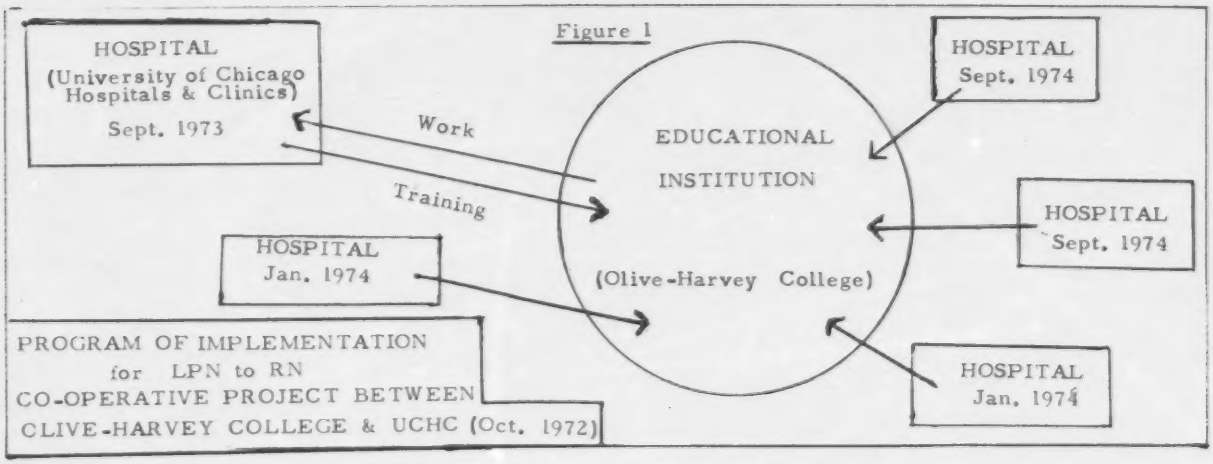
who were class members, all the others who have passed State Boards now belong to the nursing profession. Records of their performance and comparisons with nurses from other programs will contribute to the overall knowledge about efforts like the LPN to RN program under study.

We plan to collect information about the hospitals where they work, their duty assignments, their hours, any special problems they encounter. We plan to ask the cooperation of their supervisors in rating their performance in clinical areas against that of their co-workers. We hope to keep records of the progress they make, their professional growth, the contribution growing experience makes to their nursing practice. We plan to follow their educational progress and provide support and assistance wherever possible. The number who successfully pursue baccalaureate studies is of special interest to us. Their choice of schools and arrangement of class schedules (part time vs. full time, day classes vs. evening, etc.) will be important data.

Because of the success of this program, because UCHC is committed to the concept of upgrading staff through the world of work, because Olive-Harvey College sees its role as serving all segments of the community including the health providers, a proposal has been developed with similar dimensions but expanded numbers. We have proposed that the Chicago City College System, and in this case Olive-Harvey College in particular, be the educational institution for supplying health manpower to the providers in the community. Letters of commitment from community hospitals were sought and received by Olive-Harvey College indicating that several of these health providers would be willing to participate in a program of upgrading Licensed Practical Nurses from the staff of each hospital to become Registered Nurses. This model (Figure 1) would require the same components as the program under study.

Figure 1



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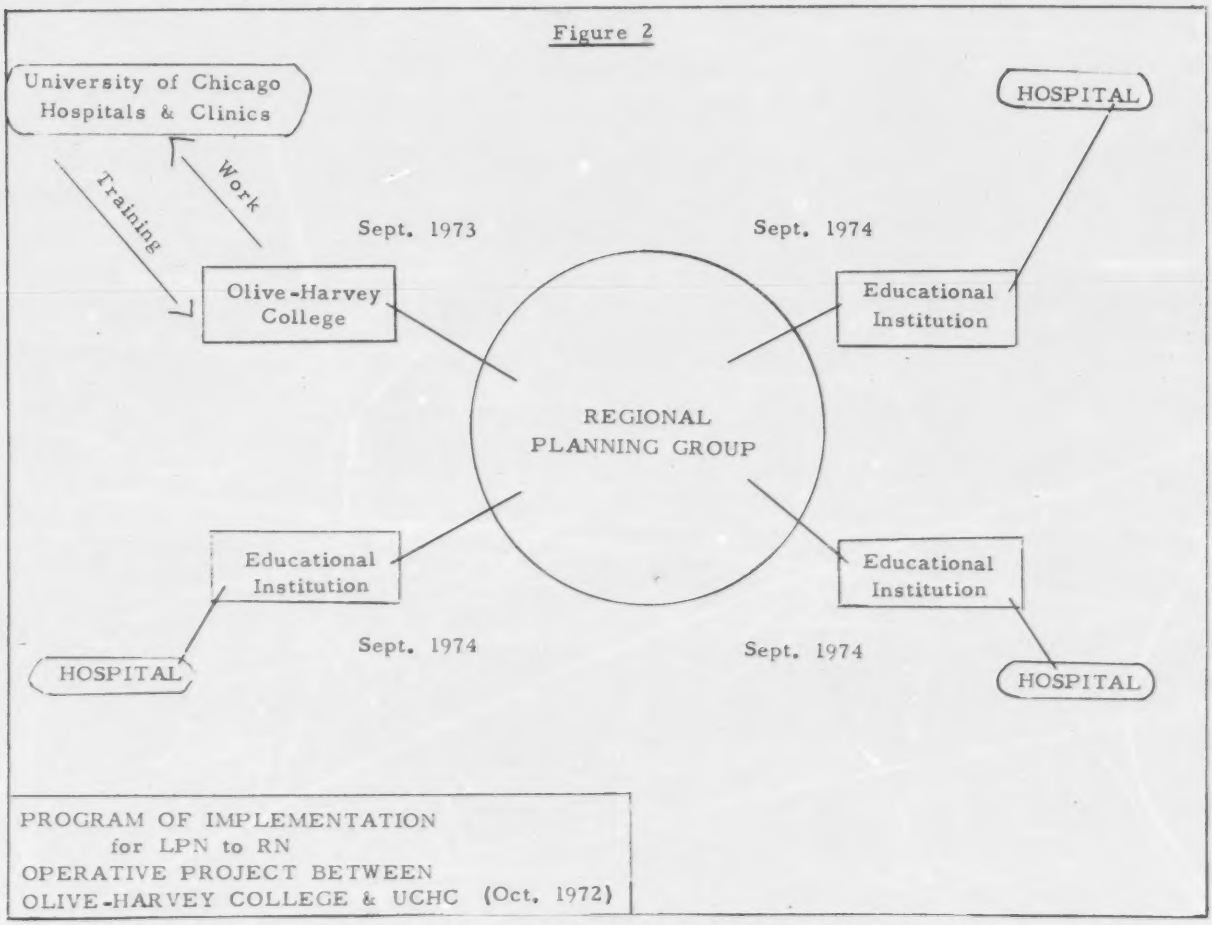
Agencies, (most probably government agencies) would have to supply funds for administrative, teaching and counseling services and for student allowances. Each health provider institution would provide the fringe benefit package while the students were in school. Funds for administration and teaching help would be necessary because the capacity of the schools to accept students is limited. In order to accommodate an enlarged student body, they would need additional staff.

The hospitals and Olive-Harvey College hoped that the implementation of the expanded model could take place in September, 1973. With that possibility in mind a proposal was developed and sent to the Bureau of Nursing in the Department of Health, Education, and Welfare in Washington, D.C. That proposal is presently under consideration but the deadline of September 1973 will not be met. An extension of this model to other community colleges in the Chicago Metropolitan area is shown in Figure 2. These institutions could provide the academic experiences which would create a skilled work force for the health providers in their own communities.

Figure 2



PROGRAM OF IMPLEMENTATION
for LPN to RN
OPERATIVE PROJECT BETWEEN
OLIVE-HARVEY COLLEGE & UCHC (Oct. 1972)

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The Department of Nursing of Olive-Harvey College administered the challenging examination to the Licensed Practical Nurse staff of The University of Chicago Hospitals and Clinics in order to determine which students could be admitted into the College's September, 1973, nursing program. The need has been clearly demonostrated by the number of LPN's who took the examinations but only 12 LPN's have been admitted to the program. Of necessity, only a limited number of LPN's from UCHC will be admitted, since Olive-Harvey College can take only a prescribed number of students and the goal of the College is to admit all students who qualify. The UCHC plans to continue supporting LPN's who wish to continue their education toward an RN. Therefore, the 12 LPN's who have been accepted in the September, 1973, class at Olive-Harvey College will have their fringe benefit package paid for when they start the full-time portions of their nurse training. However, working students, especially those with families, are not able to attend school full time without support stipends. If funds are not forthcoming, the continuation of a program like the one described in this report is highly unlikely.

Unquestionably, this program demonstrated the possibility of upgrading within the world of work. If such effort is to continue on an ongoing basis, then the partnership between the government funding agencies, the educational institutions and the private hospitals will have to continue. We believe it is an appropriate use of resources which allows for the effective utilization of health manpower from the standpoint of the individual, the hospital and the community.

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CONCLUSIONS

First, given the fact that significant correlations do not exist between NLN preadmissions examinations, the challenge examination, Grade Point Averages, NLN Achievement examinations and State Boards, we would conclude that the applicant who does not do well in preadmission and challenge examinations is not necessarily an unsuccessful nursing student. The 20 students in this pilot program did not do well on the NLN preadmission test nor did they score very well on the challenge examination. Yet they were very successful in State Board Examinations with mean scores higher than the norm. It is possible that the non-intellective factors, such as success in a previous level of nursing, work experience in nursing and heavy personal investment into occupational advancement, are better predictors of success. The fact that correlations do exist between LPN State Board scores and RN State Board scores may mean that a good and valid quantifiable predictor of success is success in a previous level of nursing.

Second, at this point we believe that the challenging examination used to identify duplications in LPN and RN training does so, at least in part. The students indicated that the course work they took was not a duplication of LPN academic material nor LPN work experience. While some of the same material was covered it was considered from a new standpoint which was helpful to them. Giving the students credit for six hours of Fundamentals of Nursing did not in any way deter them from successfully passing State Board Examinations.

Third, we believe it is possible to give credit to the LPN for practical and educational experience and still produce a qualified RN. State Board scores attest to this and we believe that the Nursing Skills Inventory appropriately identifies those areas in which the former LPN (now RN) functions well as an RN.

Fourth, we further believe that the institutional support and students' motivations were the determining factors in achieving a 100% success rate. The personal interest of someone who is concerned with the students and is available to help them solve problems, academic, personal, economic, may be of greater value than any other single factor.

Fifth, it seems to us that it is highly desirable that the students receive at least six hours academic credit for their LPN training and experience, since this in no way acted as a deterrent to

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successful completion of the program. We are not convinced, however, that six hours is enough credit for previous education and experience. It might well be that they deserve considerably more, but this statement is being made conditionally and further study is needed. Many LPN's may be deserving of more credits but the College has also had LPN's who began with Nursing 101 and earned grades of D's and F's. Many of these students who passed the challenging examination failed or earned a D in Nursing 102 and did poorly in the clinical areas. We believe motivation is a great factor. The UCHC students had a vested interest in doing well; not disappointing the UCHC, we believe was a big factor in their drive to succeed. A new program should yield other testing devices, both paper and pencil and behavioral, which should identify duplication of experience.

Sixth, we have demonstrated the value of a workable partnership among the health providers, the producers of health manpower and appropriate government agencies. Such a partnership works in every direction: toward the good of the individual; to the benefit of the institutions, both the school and the hospital, and toward the welfare of the community in the form of economic and social benefits -

a. The government benefits from increased tax revenue through higher income.

b. The community benefits through increased purchasing of goods and services.

c. Taxpayers benefit from reduction of welfare payments and avoidance of duplication of nurse training facilities and faculty.

d. The hospital benefits through reduction of recruitment cash for RN's and increased motivation and morale of staff.

Seventh, we have demonstrated that upward career mobility has human values, i.e., elimination of the notion of dead-end jobs, increased aspirations of staff and motivated, career dedicated people.

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APPENDIX A

Member Agencies

Interim Health Organization

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Interim Health Organization

Chicago Board of Education
Bureau of Health Occupations
Health Occupations Careers

Chicago Board of Health

Chicago Committee on Urban Opportunity

Chicago-Cook County Council #19
American Federation of State,
County and Municipal Employees,
AFL-CIO

Chicago Dental Society

Chicago Medical School

Chicago Area Society for Health
Education and Training

*City Colleges of Chicago

Comprehensive Research and Development
(COMPRAND)

Cook County Dept. of Public Health

Council for Bio-Medical Careers

Developmental Program for Comprehensive
Health Planning

Health and Hospital Governing Commission
of Cook County
Department of Education

Health Careers Council of Illinois

*Illinois Bureau of Employment Security
Human Services Manpower Career Center

*Illinois State Employment Service

Illinois Nurses Assoc. - Chicago District

Institute of Medicine of Chicago

Mid-Southside Health Planning Organization

Moraine Valley Community College

New Careers Council of Metropolitan
Chicago, Inc.

North Suburban Association for Health
Resources

Office of the Mayor
Model Cities Program
Special Assistant for Manpower

Prairie State College

Rehabilitation Institute of Chicago

The Woodlawn Organization

Thornton Community College

Triton College

Welfare Council of Metropolitan Chicago

Westside Health Planning Organization

YMCA Community College

Staff of the following serve as
Consultants:

American Academy of Pediatrics
American Hospital Association
Governors State University
Illinois Regional Medical Program
Oak Forest Hospital
Presbyterian-St. Luke's Hospital
Ravenswood Hospital
*U of C Hospitals and Clinics
U of C Pritzker School of Medicine
University of Illinois
Medical Center
School of Associated Science
Will Grundy Comprehensive Health Org.

* Member of Coordinating Council

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APPENDIX B

Other Programs

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Other Programs

Other programs now in existence in which an LPN can participate in an RN Program and get credit for skills learned were examined. These programs are:

1. Providence Hospital School of Nursing, Southfield, Michigan
2. South Chicago Community Hospital, Chicago, Illinois
3. Helene Fuld School of Nursing, Joint Diseases Hospital, New York, New York
4. Hunter College-Bellevue School of Nursing, New York, New York
5. Health Occupations Education, University of Iowa, Iowa City, Iowa
6. Arkansas State College, Conway, Arkansas

While there are differences between the programs, there are very important similarities.

1. Goals

   A. In all programs examined, a common goal was to meet the critical needs of nursing manpower. One way to do this is to tap a new source of recruitment, viz., the LPN on whose experience additional knowledge can be added to produce RN's.

   B. Meet the needs of the individual by providing career mobility in a way that will make use of the knowledge and skills she already has.

   C. It is generally recognized that some of our social problems stem from the fact that the minority groups in the United States have no access into the mainstream of economic life. By meeting the needs of both nursing shortages in Illinois and the individual's desire to advance in a most noble profession we fulfill our responsibility of effectively dealing with social problems - "unlocking the ghetto system."

   D. The private sector has a significant role to play in social issues. The health industry, as the second largest user of manpower, has a responsibility both to provide upward mobility to its staff and to provide good patient care.

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2. Curriculum

A. Each curriculum took into account the course content of existing LPN programs together with the practical experiences gained on the job, and a new curriculum as then developed. Based on their findings that LPN and RN curricula have duplications of material, where these duplications existed, they were eliminated. In all cases, this resulted in a shorter period of time in which an LPN needed to become an RN.

B. The emphasis in these curricula is on theory rather than practice. For example, it was found that the LPN brought to the program a fund of bedside nursing experience. Because of this, much emphasis is placed on group counseling sessions where the students and teacher can talk about the experiences on the unit as it relates to sound nursing theory. This builds on the students' past experiences and lends both dignity to their past work and reinforces their future learning.

3. The Students

A. The Helene Fuld School of Nursing of the Hospital for Joint Diseases and Hunter College-Bellevue School of Nursing are both conducting programs for LPN's to become RN's. We were particularly interested in these two programs because their student population is the same as the population we hope to reach in this program. They have the same work experiences and social problems.

B. Hunter College Program is experimental and the first group of 25 students just took the State Board Examination. All 25 who started the program, graduated and took the licensure examination.

The Helene Fuld School has been conducting its program since 1964 and their data indicate that the attrition rate of 25% is considerably lower than national norms which is 30%. 86% of their students who graduate pass the State Licensure Examination as compared to 79% on a state-wide (New York) basis.

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APPENDIX C

The University of Chicago Hospitals and Clinics

Career Ladder Programs

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Licensed Practical Nurse Program

From March, 1970, to November, 1971, The University of Chicago Hospitals and Clinics in conjunction with Health Occupations Careers, Chicago Board of Education, conducted an LPN Program for entry level staff of the University of Chicago Hospitals and Clinics.

The objectives of this program were:

(1) To provide educational opportunities and career mobility for the unskilled individuals in the health field who are traditionally locked into dead-end positions, and

(2) To fill the hospital's need for trained health personnel.

In order to meet these two objectives we had to consider the following:

The individual in an entry level position has not had the chance for further education because (1) he lacks the financial resources to quit work and to go to school. Most of these individuals are mothers who are the sole support of families. In addition to working 8 hours per day they are maintaining homes and caring for children. This would make it difficult to even consider school on a part time basis, since they need every bit of that eight-hour income and (2) this individual, even if he/she could afford to go to school has traditionally been locked out of an educational system which relies heavily on scholastic entrance tests and past educational achievements. This was confirmed when the LPN entrance examination (a Standard Reading Test) was administered to 166 interested employees. Out of this group only 37 achieved an 8.5 reading level.

Program Design:

The program was conducted on a shared work/study basis. Each student worked at his regular job 6 hours per day and attended class 3 hours per day. In order to meet the financial needs of the students, the hospital paid each student for 2 of the 3 hours they spent in class, so that although they worked on the job only 30 hours/week they continued to receive their regular 40 hours/week salary.

In order to conduct the program part time, and insure that subject matter was not diluted, the faculty of the Board of Education revised their usual full time 50 week curriculum, so that these students could complete the same program part time in 80 weeks.

The program was conducted at The University of Chicago Hospitals and Clinics. The students

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received all their clinical experience in the hospital and theory was taught in a classroom in the hospital.

The faculty was provided by the Board of Education and The University of Chicago Hospitals and Clinics, Department of Education, provided supportive services, i.e., administrative and secretarial services. In addition, two counselors on the staff of the Department of Education and Training each spent 25% of their time providing counseling services.

Student Population: The program began with 33 students selected from the staff of the University of Chicago Hospitals and Clinics. They came from various positions in the hospital:

23 Nurse Aides

3 Dietary Aides

3 Central Supply Aides

2 Ward Secretaries

1 Family Planning Educator

1 Secretary

Their length of employment at The University of Chicago Hospitals and Clinics ranged from 6 months to 13 years; the average length of employment was 4-1/2 years.

The students ranged in age from 25 to 56. The average age was 37.

Each student was required to take a reading test before entrance into the program. The scores ranged from 3.2 to 11.2. The average for the 33 students was 7.7. This is significant because the usual entrance requirement is 8.5. 23 of the 33 students had scores under 8.5; 17 of these had scores under 7.5.

There were 31 women and 2 men, 32 blacks and 1 white.

Results: In November, 1971, 22 students graduated from this program. Two students were delayed from completion because of long illnesses in which they were hospitalized. One of these re-entered the program in April, 1972, and graduated in June, 1972. The other re-entered in June, 1972, and completed the program in 16 weeks. This means that 24 of the 33 students have completed the program. Of the 11 who did not complete:

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(a) 5 were dismissed because of poor grades.

(b) 4 dropped - 2 because of health, 1 due to pregnancy, and 1 due to family problems which made it necessary for her to leave town.

The 22 students who graduated took the State Licensure examination in December, 1971. Passing grade on this examination is 350. 21 of the 22 students passed. 9 students received a grade over 500, and 2 of these students received a grade over 600.

The student who did not pass originally took the examination again and passed it then.

All of the graduates are now working as LPN's. Although the students are free to obtain jobs at any hospital, all but one of the graduates chose to remain at the University of Chicago Hospitals and Clinics as LPN's.

Conclusion: This program was a pilot project to see if, in fact, hospital programs of career mobility could -

(a) meet the needs of the community and the disadvantaged members of the community by providing educational opportunities and career mobility, and

(b) fill the hospital's need for trained health personnel by recruiting from the large untapped source of unskilled personnel, who have already shown a commitment to working in the health field.

In order to test whether we could meet the needs of the community, it was necessary for us to lower the usual entrance requirements which have traditionally locked the disadvantaged out of the system. It is interesting to note that out of 33 students, only 5 were dismissed because of poor grades. Of the 21 that did complete and pass State Boards, 15 (or 70%) tested below 8.5 on the Reading test given prior to the start of the program.

This was possible because of (1) the strong motivation of this group of students, who were familiar with and committed to a hospital career, and (2) the teaching and counseling services provided by the staff of the Board of Education and The University of Chicago Hospitals and Clinics, who were committed to using entrance examinations not as a means of keeping people out, but only as a diagnostic tool to find where students are.

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CURRICULUM PLAN

Licensed Practical Nurse Program

20 Actual Months of Study

	WEEKS	Days per Week	Hours per Day	Total Hours
1st Section (56 weeks)				
Basic Nursing	32	5	3	480
Medical-Surgical I&II	24	5	3	360
Vacation	2			
2nd Section (24 weeks)				
Geriatrics	8	5	3	120
Obstetrics	8	5	8	320
Pediatrics	8	5	8	320
TOTAL	82			1,600

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Programs Available

A. Basic Education

1. Basic Mathematics
2. Pre-GED (reading skills)
3. GED (preparation for taking high school equivalency examination)
4. English as a Second Language
5. Chemistry

B. Job Skill Training

1. Basic Typing
2. Advanced Clerical Skills
3. Medical Terminology
4. Food Service Job Skills
5. General Services Job Skills (housekeeping)

C. Career Development

a. Laboratory Field

1. Certified Laboratory Assistant (Board of Education - Health Occupations Careers)
2. Medical Laboratory Technician (2-year AA degree)
3. Medical Technologist (Chicago Medical School)

b. Nursing

1. Upgrade to LPN (Skill Center, Chicago City Colleges)
2. LPN Medication (Department of Nursing, UCHC)
3. LPN to RN (Olive-Harvey College)
4. RN to Baccalaureate (University of Illinois, College of Nursing)
5. BSN to graduate degree(s) (University of Illinois, College of Nursing)
6. Nurse Internship (Department of Nursing, UCHC)

c. Clerical

1. College Business Courses (Loop College). These courses are adjunct to the basic clerical skills taught in the hospital and will lead to an AA or AAS degree in Business.

d. Dietary (Projected)

1. Dietitian Assistant (Food Service Department, UCHC)
2. Dietitian Technician (2-year AA degree)
3. Baccalaureate (Major in Dietetics)
4. Dietitian (Internship)

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D. Continuing Higher Education (For College Credit)

1. Business 111 (Loop College)
2. English 197 (Loop College)
3. Chemistry 105 (Loop College)
4. English 097 (Loop College)

E. Management and Organizational Development

1. Leadership and Coaching
2. Personnel Aspects of Supervision
3. Communications and Problem Solving

F. Job Enrichment

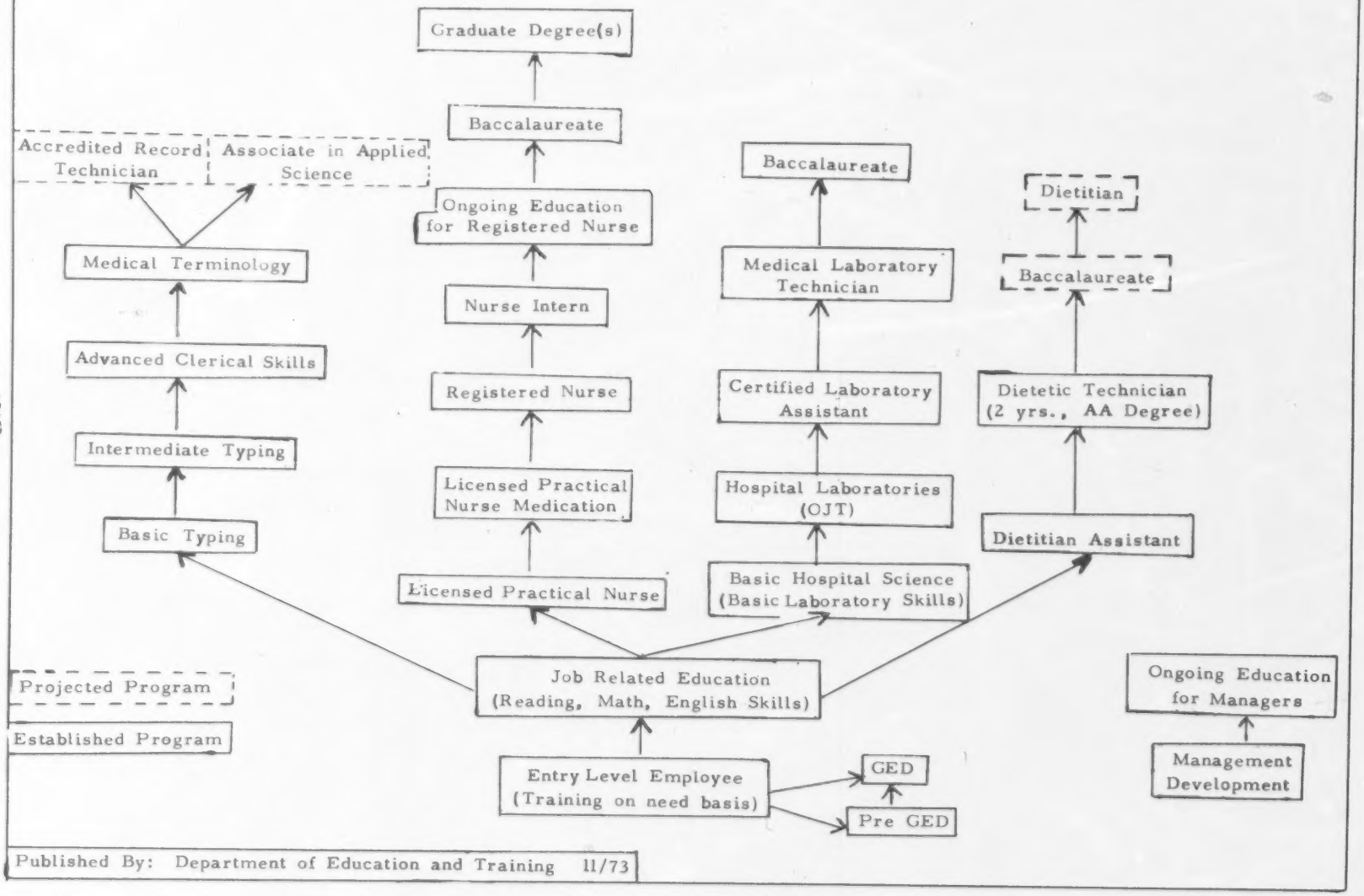
1. Human Relations
2. Job Enrichment

G. Community Service

1. Cooperative Health Study for High School Students

CAREER LADDERS

UNIVERSITY OF CHICAGO HOSPITALS AND CLINICS



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APPENDIX D

Research Questionnaire

RESEARCH on LPN to RN PROGRAM

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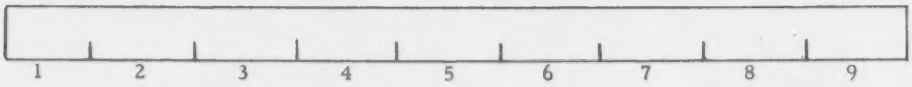

Name: _____ Social Security Number: _____

_____ 1. Individual No. _____

_____ 2. Year of Entrance Into Program: _____

_____ 3. Kind of Student: _____

_____ 4. Date of Birth: _____

_____ 5. Sex: _____

_____ 6. Race: _____

_____ 7. Marital Status: _____

_____ 8. Number of Children: _____

_____ 9. Number of Residences in Last 5 Years: _____

_____ 10. Salary as LPN Upon Completion of RN Training: _____

_____ 11. Beginning Salary as an RN: _____

_____ 12. Number of Years Work Experience as LPN: _____

_____ 13. Number of Years Employed at University of Chicago: _____

_____ 14. Number of Absences on Job 1 year Before RN Training (9/1/70 - 8/31/71) _____

_____ 15. Number of Tardies on Job 1 Year Before RN Training (9/1/70 - 8/31/71) _____

_____ 16. Area Worked in as LPN: _____

SUPERVISORS' EVALUATION AS LPN (ITEMS 17 - 30)

_____ 17. Quality of Work _____

_____ 18. Quantity of Work _____

_____ 19. Attitude _____

_____ 20. Attendance _____

_____ 21. Knowledge of Work _____

_____ 22. Reliability _____

_____ 23. Personal Appearance _____

_____ 24. Physical Fitness _____

_____ 25. Care of Equipment _____

_____ 26. Adaptability _____

_____ 27. Initiative _____

_____ 28. Judgment _____

_____ 29. Planning _____

_____ 30. Supervisory Ability _____

_____ 31. Level of Education Prior to RN Program _____

_____ 32. Date Graduated from High School (or GED) _____

_____ 33. High School Record (Standing in Class) _____

_____ 34. LPN School _____

_____ 35. Date Graduated from LPN School _____

_____ 36. LPN State Board Score _____

NLN PRE NURSING AND GUIDANCE EXAMINATION (ITEMS 37 - 45)

_____ 37. Academic Aptitude Total _____

_____ 38. Academic Aptitude Quantitative _____

_____ 39. Academic Aptitude Verbal _____

_____ 40. Reading Speed _____

_____ 41. Reading Level _____

_____ 42. Mathematics _____

_____ 43. Natural Science _____

_____ 44. Social Studies _____

_____ 45. Composite _____

_____ 46. ACT - English _____

_____ 47. ACT - Mathematics _____

_____ 48. ACT - Social Studies _____

_____ 49. ACT - Natural Science _____

_____ 50. ACT - Composite _____

_____ 51. Challenging Exam Score _____

_____ 52. Nursing 101 _____

_____ 53. Nursing 102 _____

_____ 54. Nursing 201 _____

_____ 55. Nursing 202 _____

_____ 56. Nursing 203 _____

_____ 57. Nursing 106 _____

_____ 58. Biology 126 _____

_____ 59. Biology 127 _____

_____ 60. Microbiology 119 _____

_____ 61. Social Science _____

_____ 62. English 101 _____

_____ 63. English 102 _____

_____ 64. Psychology 201 _____

_____ 65. Sociology _____

_____ 66. Humanities 201 _____

_____ 67. Child Development _____

_____ 68. Math 103 (or comparable course) _____

_____ 69. Chemistry 131 or 105 _____

_____ 70. Employed During RN Program (Yes - No) _____

_____ 71. Average Number Hours Worked per week During program _____

_____ 72. Total Grade Point Average During Program: _____

_____ 73. Grade Point Average for Nursing Courses Only: _____

_____ 74. Grade Point Average for Liberal Arts Courses: _____

_____ 75. NLN Achievement Test - Medical Nursing _____

_____ 76. NLN Achievement Test - Surgical Nursing _____

_____ 77. NLN Achievement Test - Psychology _____

_____ 78. NLN Achievement Test - Obstetrics _____

_____ 79. NLN Achievement Test - Pediatrics _____

RN STATE BOARDS (ITEMS 80 - 85)

_____ 80. Medical Nursing _____

_____ 81. Surgical Nursing _____

_____ 82. Obstet. Nursing _____

_____ 83. Pediatric Nursing _____

_____ 84. Psych. Nursing _____

_____ 85. Average in 5 Areas _____

_____ 86. Status in Program _____

_____ 87. Year of Graduation as RN _____

_____ 88. Do You Plan on Continuing Your Education? _____

_____ 89. When? _____

_____ 90. How? _____

DID YOU FEEL THAT THE FOLLOWING PORTIONS OF THE PROGRAM WERE REPETITIOUS OF LPN TRAINING? (YES - NO)

_____ 91. Nursing 102 Theory _____

_____ 92. Nursing 102 Clinical Experience _____

_____ 93. Nursing 201 Theory _____

_____ 94. Nursing 201 Clinical Experience _____

_____ 95. Nursing 202 Theory _____

_____ 96. Nursing 201 Clinical Experience _____

_____ 97. Nursing 203 _____

_____ 98. Area Now Working In as RN _____

_____ 99. Was This Your First Choice? (Yes - No) _____

_____ 100. Did You Return to the Area You Worked as LPN? (Yes - No) _____

_____ 101. Why or Why Not? _____

_____ 102. What functions are you performing as an RN, that you did not perform as an LPN? _____

_____ 103. Did you take Medication Course as an LPN? (Yes - No) _____

Developed by Education and Training Department of the University of Chicago Hospitals and Clinics

APPENDIX E

Nursing Skills Inventory Questionnaire

Nurse Internship Program - Skill Inventory

Name: _____ School of NSG. _____ Yr. Grad. _____

Experience: _____ Area of Experience: _____

Please indicate in the appropriate column what your experience with the following procedures is:

	Can Function Independently	Have Never Done	Need Review
1. Alternating pressure mattress			
2. Application of ace bandages			
3. Baron pump for tube feedings			
4. Bedscale			
5. Cardiac Monitors			
6. Cardio-pulmonary Resuscitation			
7. Catheterization: Insertion of Foley			
8. Catheterization: Removal of Foley			
9. Central Venous pressure			
10. Clean Catch urine specimen			
11. Circo-electric bed			
12. Colostomy care			
13. Dermatology dressings			
14. Fractionals			
15. Gastric feedings			
16. Hypo-hyperthermia mattress			
17. K-Pak			
18. Pap. smear			
19. Care of patient with chest tubes			
20. Specific Gravity			
21. Suction: Tracheostomy			
22. Suction: Naso-tracheal			
23. Team leading: Making assignments			
24. Team Leading: Managing Patient Care			
25. Formulating nursing care plans			
26. Passing meds. for team or nsg. unit			

Developed by Dept. of Nursing - The University of Chicago Hospitals and Clinics

APPENDIX F

Cost of Program

* Total Cost of Program

Source of Funds	Total Amount
State of Illinois, Dept. of Vocational and Technical Education	$140,000.00
State of Illinois Bureau of Employment Security (MDTA Funds)	50,000.00
The University of Chicago Hospitals and Clinics Women's Auxiliary	7,000.00
The University of Chicago Hospitals and Clinics (Fringe Benefits)	10,000.00
	$207,000.00

*All figures have been rounded to nearest thousand.